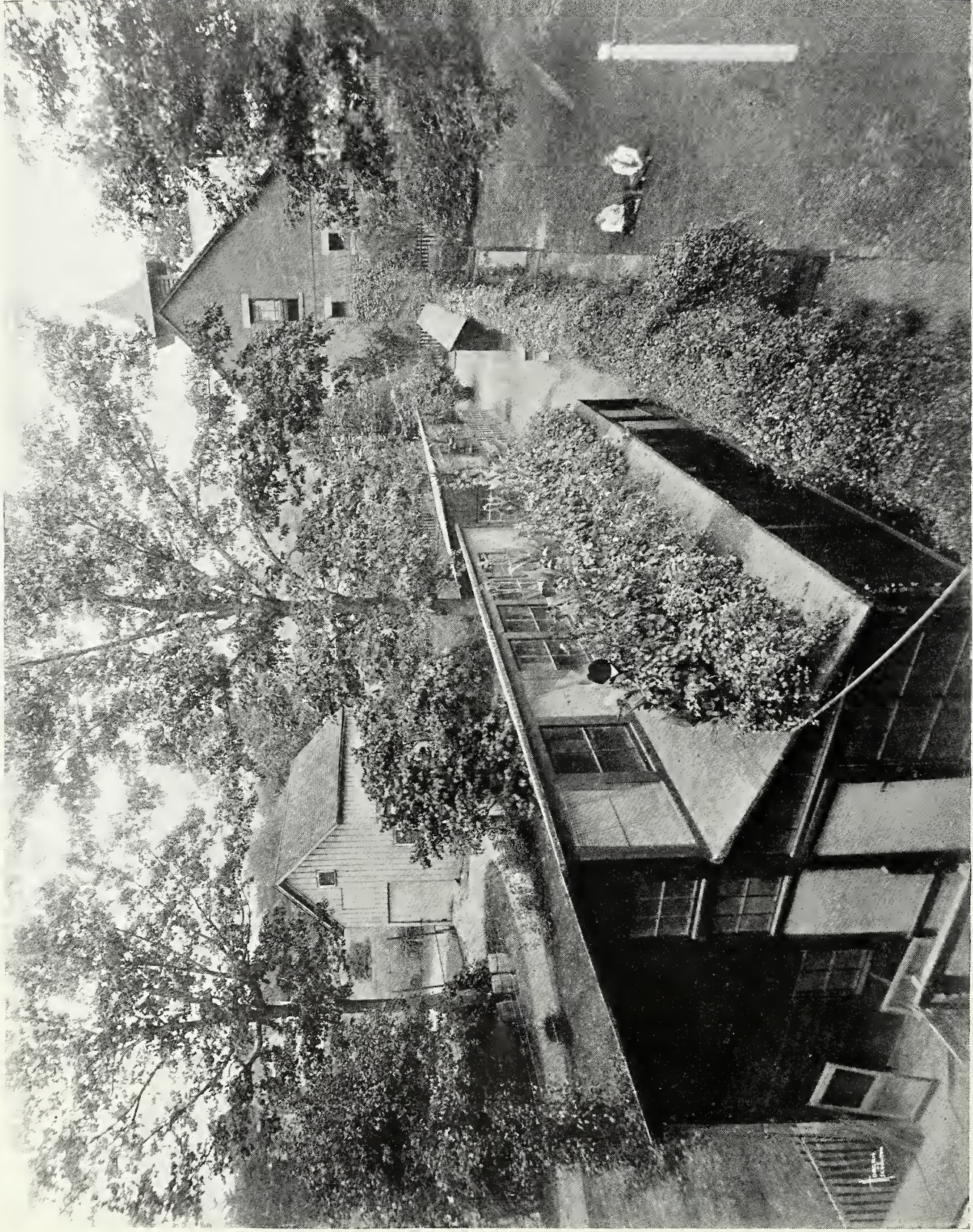


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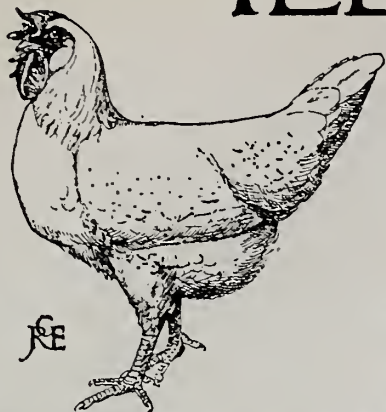


THE HOME OF "LADY WASHINGTON," ONE OF THE FINEST BLACK ORPINGTON HENS EVER BRED IN
THE UNITED STATES.

The poultry plant is arranged excellently ; it is, in fact, quite a model establishment.

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THE ILLUSTRATED POULTRY RECORD



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DIARY OF THE MONTH.

EDITORIAL NOTICES.

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The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs, or sketches, and publication in the ILLUSTRATED POULTRY RECORD can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.

The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual Subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the ILLUSTRATED POULTRY RECORD.

The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor. The latest date for receiving advertisements is the 20th of the month preceding date of issue.

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the Editor.

Winter Eggs.

The annual problem of how to obtain the winter egg is once again claiming attention, and the methods, therefore, of a Sussex farmer, who is most successful in obtaining eggs all the year round, may be of interest. He hatches every week in the twelve months to keep up a supply of table birds for a large private trade, and from each brood saves one or two pullets to come in for egg production as they mature. The layers are kept out in the fields, in low portable houses (built somewhat like the Sussex "arks," with open barred floors), twenty-five birds to each house, and are well fed. The soft food, composed of potatoes, house scraps, and waste vegetables, thoroughly cooked in a copper and dried off with sharps and bran, is given hot, and oats and maize are supplied as grain. The secret of success, however, seems to lie in the generous allowance of skim milk that the birds receive; it is taken out to them daily in the fields and poured into iron troughs, and is greedily consumed, the returns from the egg basket amply justifying the practice. The birds on the farm are all of a good table type, big-bodied fowls, with large breasts and white legs, Light and Red Sussex and Buff Orpingtons predominating. They are maintained in good enough condition for killing at any time, yet considered as egg-producers they are eminently satisfactory both as regards number and quality.

Poultry in Nyasaland.

Distribution of animals, birds, and plants has always been influenced considerably by the exertions of those who have settled in other lands, more especially in these later days, when inter-communication is comparatively easy. We are led to these observations as a result of meeting, at the Dairy Show, an old friend home on fur-

lough from Nyasaland, in which African protectorate he holds an official position, to which he returns shortly, and intends taking some poultry out with him. It was interesting to learn that something has been done in that direction, as to know that the ubiquitous Buff Orpington has proved very successful there, again showing another sign of its adaptability. It has proved of especial value when crossed with the native races, which are very small in size of body and lay small eggs. There are great possibilities for poultry-keeping in these distant protectorates, and the pioneers of Empire, more especially when they take an intelligent interest in such questions, are influencing the future to a remarkable extent. It may be that the introduction of breeds in this way will be the means of evolving new types as well as of immediately adding to the productiveness of the different countries. Special difficulties may have to be met, especially in respect to disease, but the men who go from the Old Country are quite capable of overcoming these obstacles.

Utility Poultry in Kent.

For some years the Education Committee of the Kent County Council has held annually a competition in connection with the courses of instruction in poultry rearing, &c., which, from its practical character, has not received the attention it deserves. That held on September 27, at Tunbridge Wells, was the largest of any of the series, the poultry exhibits reaching nearly four hundred. The classes are open only to competitors who have attended lectures arranged for by the Committee, and were divided in accordance with the size of holdings. The egg section embraced 259 lots of a dozen each; 18 models of appliances were on display, and the balance was made up by table-poultry. It is evident from the large number of exhibitors that this competition arouses great interest, and cannot fail to give practical demonstration of the valuable results obtained as a result of the county instruction. The Kent County Council was one of the first to take up the systematic teaching of this subject, nearly twenty years ago, and has maintained it throughout. It is to be congratulated upon what has been accomplished, affording an example which other counties might copy with profit. The small amount of money which such a competition involves is well expended.

Ireland's Progress.

The agricultural statistics of Ireland for 1911 tell of further advance in the number of poultry in that country, and show an increase as compared with 1910 of 1,108,786, of which 424,388

are adult stock and 684,398 hatched in the current year. The totals recorded are: Adult stock, 14,411,693; hatched 1911, 11,036,108, or 25,447,801 in all, representing an increase of 4.56 per cent. Taking the various provinces, the respective advances are: Ulster, 408,874; Munster, 279,623; Leinster, 221,460; Connaught, 198,829. Of the thirty-three counties in Ireland six only show a decline in the number of poultry, and these are small—namely, Dublin, King's and Westmeath in Leinster, Londonderry and Monaghan in Ulster, and Mayo in Connaught—Munster recording an advance all round. It is satisfactory to note that all classes of poultry are increasing, the figures being: Turkeys, increase 78,743 (7.42 per cent.); geese, increase 37,922 (2.13 per cent.); ducks, increase 73,472 (2.18 per cent.); fowls, increase 918,649 (5.06 per cent.). The general distribution was specially dealt with and at length in the POULTRY RECORD of May last, and have not materially altered this year.

Where Ireland Does Not Excel.

So much is to the good, but there is another aspect of the question which demands attention—namely, the way in which eggs are marketed. That there has been an improvement of late years is unquestionable, chiefly where the produce is from co-operative societies. As the latter, however, is only about £75,000 out of a total egg export in 1910 of £2,744,000, it is evident that only a small moiety is controlled in this way, and the main question is concerned with the condition of those which pass through the ordinary channels of trade, and these latter determine the position of Irish supplies on our markets. At a meeting held recently of the Northern Council of the Grocers' Associations very strong statements were made as to the condition in which Irish eggs are received, equally as to want of cleanliness and holding for a rising market at this season of the year. One speaker said that he had ceased to stock Irish eggs, owing to the trouble and loss entailed by them at this period. Commenting upon this question, one of the Belfast dailies said: "Several officers of the Department are paid for endeavouring to prevent English traders from selling eggs from Russia as Irish, and if there is a just cause for complaint against Irish exporters on the lines asserted at the Manchester meeting, the public money spent on the Department's work in this direction is merely wasted." The fact is that when home produce is of the best quality and is marketed expeditiously and in the right way, it needs no artificial production. When Irish or other eggs are dealt with carefully and fairly, Russians cannot be palmed off for them. It is when the quality is not very different that the risks are greater. The remedy is very easily seen.

The Climb-Down of the Southdown.

"Victory!" writes "Home Counties," whose article, "Our Account with the Fox and Some Preliminary Work with a Shot Gun," our readers will remember appeared last month. "The Southdown has been paying up during the month to all and sundry who have claims upon it. No more, 'Farmers and labourers only will be dealt with.' No more, 'Your claim will be considered in April.' This is a most notable triumph for Miss Galbraith's Society with a Shot Gun, and will, no doubt, have the most blessed results on other hunts who are inclined to Southdown a bit on their own account. The Jael of this righteous movement will receive, it is to be hoped, the

The Magyar Fowl.

By the way, "Home Counties" writes to say that he has a hen of the rare Magyar breed, which he would be glad to give to any responsible poultry-keeper who has a male bird of that variety. The Magyar breed is generally white, though there are other colours, and in size half-way between the Wyandotte and Leghorn. "Home Counties" says that the birds have not with him distinguished themselves particularly as layers, but they are hardy and very nice stock to keep. The male birds have particularly good tail. The birds emit, when alarmed, a somewhat different sound from ordinary poultry, and altogether the Magyar breed is an interesting experiment.



MAGYAR FOWLS ON AN HUNGARIAN POULTRY-FARM.

[Copyright.]

Readers should refer to the note on this page and to the offer made by "Home Counties."

congratulations of her fellow poultry-keepers. In her unsatisfactory state of health it has been a real sacrifice of strength, and undoubtedly she has spent a good deal of money. The incident of the Southdown is a very good illustration of the excellent results of firmness. No one believes that the majority of hunting people want to do other than the straight thing by poultry-keepers, and the minority which is inclined to be tricky must have a sharp lesson. Bravo, Miss Galbraith!"

Poultry-Breeding in Manufacturing Districts.

A meeting was recently held at Oldham, Lancashire, with a view to the formation of a branch of the Poultry Dealers' League, whatever that body may be. The name is unfortunate, but that does not matter if good work is accomplished. Mr. W. Hooley, of Southport, gave an address in which he rightly held up what had been done at Burnley as an example to be copied and emulated. The more there is of that the better. We see no

reason why every one of the manufacturing centres throughout the country should not do equally well as have members of the Northern Utility Poultry Club. The main difficulty is obtaining suitable land in convenient positions for men who are engaged all day in their ordinary avocations, and at a fair price. For some of the plots at Burnley rent is paid at the rate of £10 per acre, which is extortionate for what is practically useless for other purposes. "The needs of one man is the opportunity of another" is applied to the extreme. If the poultry clubs and fanciers' societies, of which there are so many throughout the country, would combine on co-operative lines, and hire land from private owners or local authorities in blocks, they should be able to secure more favourable terms and bring that influence to bear upon county councils and municipalities which would compel attention, more than is possible to individuals. This is a question of considerable importance. Millions more hens could be kept than is now the case in our industrial districts.

A Cheap Preventive.

All the publicity which is being given to tuberculosis, human, bovine and avian, though much of it is calculated to cause discomfort in the minds of consumers, will be of ultimate benefit if it compels poultry-keepers to pay greater attention to the healthfulness of their flocks. Fortunately, as has been pointed out and received official support, the evidences are that avian tuberculosis is not easily communicable to man, though even the Sanitary Inspectors' Congress appeared to ignore that fact. Yet the fact of so many poultry being affected is serious enough. A leaflet recently issued by the Irish Department of Agriculture states that it is believed ten per cent. of the deaths from natural causes among poultry arise from this cause. We should have been inclined to place the average much higher. How far chickenhood deaths are due to enfeeblement arising from the tubercular condition of the parents is probably greater than is thought. So far as our knowledge goes the main causes of tuberculosis, apart from direct bacterial action, are impure air, foul water, and tainted soil, in the order named. Possibly if every bird had a sufficient supply of oxygen—that is, a pure atmosphere—this disease would be reduced by three-fifths, leaving each of the others to account for one-fifth. What is more, absolutely pure air would give such a tone to the entire system that the effects of even these would be minimised. By the use of open-fronted houses, by cleanliness, by seeing that water if supplied is pure, and by combination of cultivation with poultry will tainted soil be avoided. It is undoubtedly true that much tuberculosis is caused by what has been called "bird-cage poul-

try-keeping"—that is, in small houses and runs; but farmers and others are not wholly free from blame.

The Street Anniversary.

On September 23 the tenth anniversary of the foundation of the Street District Co-operative Poultry-rearing and Egg-collecting Society was held, after which two conferences took place at which there was a large attendance. Beginning in a very small way, the share capital at first subscribed only amounting to a little over £9, the society has now grown into a very big concern, occupying a large farmhouse as business premises. The membership now stands at something over 200.

In addition to members, the meetings were attended by interested persons from all parts of the country. The farm and depôt were open to visitors during the afternoon, and, among others, were visited by Sir Edward Strachey, M.P., Mr. Henry Hobhouse, chairman of the Somerset County Council; Mr. F. J. Clark, Mr. Brian T. Mennell, of the Irish Board of Agriculture; Mr. Percy Percival, President U.P.C.; Mr. Edward Brown, F.L.S., Hon. Sec. N.P.O.S.; Mr. J. G. Kitson, Sec. British Poultry Federation; Mr. A. D. Allen, of the Wilts County Council; and Mr. C. E. Walkey, the Somerset County Council poultry expert.

The Discussions.

Interesting discussion then took place upon the subject of poultry and eggs.—Mr. W. Reynolds (secretary of the Street Society) opened with a paper on "The Encouragement of Winter Supplies of Eggs by Depôts," and Mr. Brian T. Mennell, of the Irish Board of Agriculture, spoke on the subject of "The Purchase of Eggs by Weight."

The evening conference was presided over by Mr. James C. Morland, president of the Street Society.—Mr. W. Reynolds gave a review of the society's operations during its career, and said that during $9\frac{1}{4}$ years the profits had amounted to £865, and £600 had been paid in dividends. Some 3,822,000 eggs had been sold, realising £17,222. Mr. Ralph Dixon, of the Worcester-shire Poultry Farm, then gave a paper on "Laying Strain and Improvement," and Mr. J. W. Hurst then gave an address on "The Rearing of Chickens for Table."

THE CRYSTAL PALACE SHOW.

Our Stand at the forthcoming Crystal Palace Show is in our usual position, where we shall be pleased to see our friends.—Ed. I.P.R.

THE BARBUS NAINS (BEARDED BANTAMS) OF BELGIUM.

By A. VAN GELDER,

President of the Club Avicole de Barbu Nain.



FOR the first time our interesting Barbus will be shown at the forthcoming Crystal Palace Show, and, as founder and President of the "Club Avicole du Barbu Nain" (C.A.B.N.), it is particularly gratifying to me to be able, through your interesting and renowned journal, to introduce the Barbus to English fanciers and to give them a short history of the race, the foundation of the Club, and a description of some of the varieties unknown to the English public.

Eight years ago the Barbus were very little regarded in Belgium, as they were then in the hands of only three or four breeders, and very few birds were seen at our big shows. Belgian poultrymen had then commenced to breed extensively the Coucou de Malines, the Braekel, and the Campine, so that little attention was given to their native Bantams. It so happened that in the year 1903 I took a great fancy to these little Barbus, and founded in 1904, together with Mr. Louis Vander-Snickt, Chief Editor of *Chasse et Pêche*, and Mr. Ch. Buis, a veteran fancier, a Club to foster the interests of our Bantams.

Our C.A.B.N. set at once seriously to work with an enthusiastic propaganda in the poultry papers and amongst our friends, with the result that while formerly twenty Barbus would have been considered as a representative number at Belgian shows, we were able in one year's time to exhibit 120 birds! Since that moment we have kept on increasing every year, and at last year's World's Fair in Brussels there were 800 Barbus, which is, I think, a record number of entries for one single breed of Bantams.

The Barbus Nains comprise four distinct races: The Barbu d'Uccle (Uccle Bearded Bantams), booted and single combed; the Barbu d'Anvers (Antwerp Bearded Bantams), clean legged and rosecombed; the Barbu d'Everberg (Everberg Bearded Bantams), like the Uccles, but tailless; and the Barbu de Grubbe (Grubbe Bearded Bantams), like the Antwerps, but also tailless.

Of the Barbus d'Uccle, then called Barbus Pattus (Bearded Booted), four distinct varieties were shown, and as they have never been produced anywhere before in so many varieties, it was necessary to give them a different name. Thanks to the C.A.B.N., classes were provided for them at our largest show in Brussels, and as the principal seat of the Club was in Uccle, a suburb of Brussels, it was decided in 1904 to call them Barbus d'Uccle.

These Barbus d'Uccle are of very ancient race, and were probably imported directly to the Netherlands from the Indian city of Bantam. They have never ceased to exist in our Belgian castles and farms, but I have not succeeded in finding any precise information about them in any of the ancient books on poultry.

The Barbu d'Uccle is a bearded variety of the Dutch Sabelpoot. The latter is bred and raised extensively in Holland and Germany. Occasion-

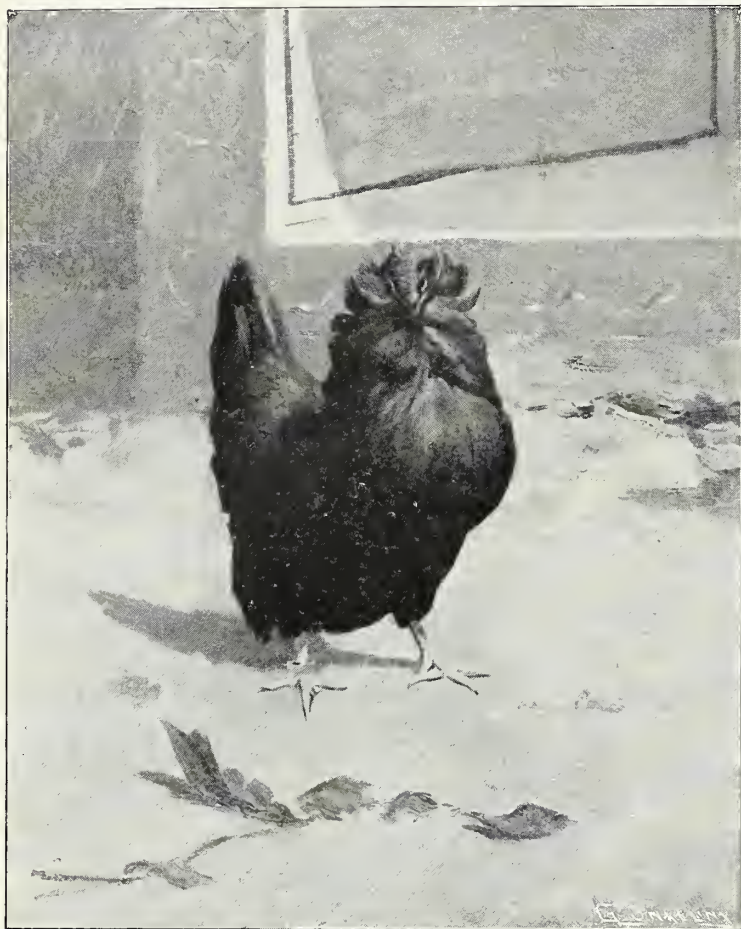


BLACK BARBU D'ANVERS COCK. [Copyright.]

ally the beard reappears in the offspring, but, being against the Standard, they are at once suppressed. The Barbu d'Uccle is considered above all to be a race *de luxe*. They combine elegance of form with the charm of a most diversified and original colouring of unequalled richness. Their *tout ensemble* is wonderfully harmonious.

The most interesting varieties are: The Mille-Fleurs, of which the ground colour is of a dark fawn, each feather having at its end a spangle of black, bordered with a white crescent above the spangle; the Porcelaine, of which the ground

colour is of a Nankin shade, each feather having at its end a spangle of light delicate blue, bordered with a crescent of white above the spangle; the Cailloutés, of which the ground colour is black, each feather having at its end a crescent of white above the spangle. Then there are the Whites, the Blacks, and the Cuckoos.



BLACK BARBU D'ANVERS PULLET. [Copyright.]

The Barbus d'Anvers are of very ancient Belgian origin. They are very typical little fellows. The way they keep their wings close to the body and perpendicular to the ground is unique; their heavy beard and whiskers give them the expression of an owl. Like the well-known Belgian pet dog, the Griffon Bruxellois, they personify the Belgian character in showing a combative spirit; they are proud, robust, and arrogantly comical.

The following varieties are the most extensively bred: Blacks, Cuckoos, Whites, Mille-Fleurs, Cailloutés, Cailles, Blues, Fauves, and Porcelaines.

The Mille-Fleurs and the Cailloutés are coloured like the same varieties in the Uccles. The Porcelaines are less extensively bred. Their colour is like that of the Uccles Porcelaines. They are very beautiful birds. The Cailles, so called after the well-known little wild Quails, whose colour they resemble, merit here special mention. The upper part of the body has a

brown chocolate under-tone, each feather marked with a light ochre "nervure." The breast and under-breast are of a warm Nankin shade. The effect caused by the strong opposition of these two colourings is extremely picturesque and striking. It has taken me many years to perfect this new and unique variety, which, I am happy to say, is breeding now perfectly true to colour.

The shade of the Blues is like that of the Andalusians, with each feather distinctly laced with black. In the variety Fauve (Buff), the cock has its back red and the under-part light brown; the hen an even buff colour all over. The black neck hackle shown in some of the birds of this variety should be eliminated.

For the past seven years the Club, conscious of its task, has kept on working steadily ahead. The time has now come to show the results to the poultry world outside of Belgium. Solicited by the Committee of the Poultry Show at the



BARBU D'UCCLE COCKEREL. [Copyright.]
Porcelaine Variety.

Crystal Palace, we shall have pleasure in displaying them in England before a body of poultrymen so intelligent and renowned as are the English fanciers. The Committee have been good enough to allow us a special space, reserved to our Club Show, which we intend to decorate and arrange exactly as we do in our principal International Show at Brussels.

A novelty introduced by us in Belgium a few years ago will be, I think, of interest to British poultry-lovers. It consists in a new way of exhibiting one to six of a variety, put up in a rectangular pen wired on all sides, thus showing in a very effective manner the uniformity and harmony of each variety. These pens we shall specially bring over for the purpose.

To show his interest in this exhibition at the Crystal Palace, our King Albert has graciously offered a gold medal for the best collection of Barbus exhibited. The Minister of Agriculture and our National Poultry Federation are strongly supporting us, and have given us substantial encouragement in the way of numerous Specials. The Committee of your Crystal Palace Show has offered a number of Specials to be allotted to birds exhibited in single classes, and our Club gives two silver cups for the best pens, one to six in each variety, with an extra present of £10 with each cup.

Mr. Robert Pauwels, the well-known fancier and breeder of high-class fancy birds, will judge the Uccles, and Mr. Paul Monseu, the well-known breeder, will judge the Antwerps.

I hope that this short description will enable your readers to form an idea of what Bearded Bantams are like, and what the object of our Club is in exhibiting next month at the Crystal Palace Show. May it induce a great number of your poultry-loving readers to inspect, study, and take interest in our dear little Barbus!



BARBU D'UCCLE PULLET.

[Copyright.]

Porcelaine Variety.

THE CHICK—WHAT IT MAY BECOME.

“WAIT AND SEE.”

By EDWARD BROWN, F. L. S.



THE writer has well said, “an egg is a sermon and a miracle.” Every individual chicken when hatched embodies within itself possibilities that are almost beyond our comprehension. It is a new creation in which the mysteries of the past are linked with the unrevealed wonders of the future. Within its little body are embraced influences of many generations of its progenitors, stretching far backwards, the combination of which cannot fail to materially affect its own progeny, should it live to add one more rung to the ever lengthening ladder of life. In that small, feeble ball of fluff and flesh are forces that have baffled the greatest minds of all ages. How these may be controlled, augmented, or decreased offer

problems the solution of which is worthy the study of the scientist and the practical man. Whether the secrets there hidden will ever be revealed remains to be proved. Should that be the result in days to come, it will only be after many failures, numerous mistakes, repeated discouragements, and by the combined labours and researches of the two sections named. The fact is more and more apparent that science to fulfil its purpose must be the handmaiden of practice.

INHERITED TENDENCIES.

The chick as we see it is a concrete example of heredity. To quote Professor Eugene Davenport: “Heredity refers to the distribution of racial characters among individuals of successive generations. On the principle of

heredity all successful breeding operations depend, and the practical breeder needs to know all that is known concerning the manner in which succeeding generations are built up out of those characters which constitute the heritage of the race." The truth applies equally to the future as to the past. What "has been" is of comparatively small importance, save in so far as it helps us to what "may be." The one is now beyond our reach. Its record has been made, its gains or losses realised. That which means everything to us is what can yet be accomplished. To the breeder a question of supreme importance is whether the chicken will grow and yield a profit, over its cost, to reward him for his work in connection with it, and, in a moiety of cases at least, transmit to the next and succeeding generations its own good qualities. The very uncertainty of it all is fascinating in the extreme, a speculation in which much may be done to attain the desired end. Something, however, is present that may upset all calculations and anticipations.

FACTORS PRESENT AND LATENT.

Nor is this a question of the immediate parents. That these have their influence is true, mainly, however, by reason of the fact that they in turn embody the tendencies of their ancestors, some of which may have been latent, skipping without apparent reason one or two generations, yet none the less present. We cannot assume because either parent exhibits given characters or qualities that these will be transmitted just as they are, neither more nor less. That "like produces like" is true to a considerable degree, but with important limitations which no breeder can, or will be permitted to, ignore. It is generally admitted that the longer any character or quality has been maintained without variation, without discontinuity, the greater are the probabilities that it will be maintained. Such is not, however, an absolutely fixed rule. When least expected latent factors may make their appearance and apparent factors disappear. As a consequence each chicken has its own individuality, its own heritage, the demonstration of which cannot be foretold. For that we must "wait and see."

WARRANTABLE EXPECTATIONS.

There are, however, subject to the qualifications already noted, some characters and qualities which reasonable expectation, as a result of experience, warrants our confidence in looking for in so far as our knowledge of the parentage goes. Where the type has been fixed for a sufficient period, and what has been known as a pure breed obtained, we anticipate that the same, with variations, will be reproduced. If we mate Bantams we do not obtain Indian Game; if we breed from

Game Fowls we do not get Cochins; if we use pure-blooded Leghorns we do not breed Orpingtons. That much is certain, if not very much more. The reason why cross-breeding is so uncertain in result is that the combination of potent tendencies is vastly increased, and play is often given to latent influences which exert themselves with enhanced vigour. In this direction size of body may be mentioned, not the size of the individuals, which may be personal and exceptional, but that of the race. Size, however, is also a question of environment and of nutrition. Under favourable conditions and with abundant food, frame and flesh may be increased above the normal, and vice versa. From that we learn how the chick just hatched may be modified, may be grown larger or smaller than its parents, with the proviso that the risk of loss by striving for the abnormal is always increased. The size of a chick at the time of hatching is no guide as to its ultimate weight. In many cases the chicks from the larger breeds at that stage are actually smaller than those from parents half the adult weight.

PLUMAGE AND MATERNAL INSTINCT.

The colouration of plumage need not, at this point, trouble the poultry-keeper, who has, again with limitations, a fair measure of confidence as to the final result. The colour of the down feathers is of small moment, and may appear to be the opposite of what might be expected. Variations do occur, for which we must be prepared. In that direction, as the fancier well knows, heredity is at work and proves to be a most important factor. The same is true in respect to maternal tendencies. As a general rule non-sitting parents produce non-sitting pullets, with exceptions. Sometimes I have bred 200 to 300 Leghorn pullets not one of which evinced the slightest desire to sit. At other times, and without any apparent reason, I have known several become broody. It is, however, a suspension of instinct, liable at any time to reappear.

Almost all the time since fowls were first domesticated efforts have been put forth to win entrance to the great mystery of sex. The cock-fighting Indian or Greek wanted as many males and as few females as he could secure. Therefore, very early this problem commanded attention. In our days the breeder of table-chickens would prefer a majority of males, whilst the breeder for eggs desires a greater percentage of pullets. Wonderful theories as to the determination of sex have been propounded from the time of Aristotle. But we are apparently almost as far off discovery of the secret as ever. The "Sexophane" scarcely satisfies the purchasers. Had it proved successful a fortune would have rewarded the inventor. That there are differences between one sex and another is unquestionable.

The chick conceals them, and once more Mother Nature says to the enquirer, "Wait and see."

CONSTITUTIONAL VIGOUR.

Vigour of constitution is undoubtedly inherited. Weak though the little chick may be in the first diurnal period of its existence, it may possess a possible strength unrevealed as yet. The poultry-keeper who breeds from weakened or debilitated stock, whether in the immediate or former generations, deserves all the loss he may sustain, and should receive no sympathy or pity. He has been out for trouble, and got what he bred for. Yet there are many who systematically use immature or enfeebled stock, and then wonder why their chickens die. Some of our ultra-trap-nesters are preparing a rod in pickle for their own backs. At the same time every step may be taken to secure vigorous, hardy parents, yet by over-feeding, by keeping under unsuitable conditions, or by bad treatment of the eggs during the chick's embryonic stage, weaklings are the result. Then it is too late to find a remedy. Prevention, not cure, is wanted.

POTENTIALITIES.

The potentialities in the newly-hatched chick as to what it may do either in flesh or egg production are of the deepest interest, more in the latter than the former, by reason of the fact that egg laying is more variable than the growth of flesh. It is in these two directions that the profit lies. Will the chick develop rapidly, and, on the one hand, make quickly into a plump, meaty chicken, or, on the other, will it, if a pullet, begin to lay early and prove prolific in the truest sense? These are problems which present themselves, but to which there is no definite answer. We must "wait and see," doing our best, so far as we know it, to help towards the end in view.

The newly-hatched chick is a bundle of "has-beens" and a combination of "might-be's." Dependent, it is true, upon treatment during its earthly career, but with influences within it that are powerful in the extreme, often more potent than man's best efforts can overcome. Yet heredity is not all. There is something more, in which we may take a large share, and contribute to our own success.

INTENSIFICATION OF METHOD.

Infantile dangers threaten the chicken from the outset, by reason of its inability to resist influences which would scarcely affect older or adult birds. Some of these appear to be scarcely preventable, yet it is not too much to assume that the majority of chickens which die young do so either as a result of prenatal or embryonic enfeeblement, or to our want of knowledge how to manage them. Under normal conditions, especially when a hen is allowed to sit where and at the time she likes, mortality in chicks is compara-

tively small. Intensification accounts for infertility in eggs, death in shell, and brevity of life, not so much that these kill the birds directly as that the environment tends to the increase of parasites and bacteria, and the vitality of the birds is insufficient to enable them to combat these enemies. That is a question upon which much might be said, more especially in view of present-day developments upon intensive lines. Even if the Philo system should warrant a part of the claims now being made for it as a means of rearing chickens, the breeding from stock kept under similar restricted conditions, if continued in successive generations, will, assuredly, in my judgment, weaken the birds and reduce their power of resistance. Should that prove to be the case, then we shall have a repetition of the disasters of the past. The first point, therefore, is by cleanliness, favourable conditions, and suitable food to arm our birds with vigour, enabling them to fight against numerous enemies which threaten them at this stage.

FLESH QUALITIES.

Given that the chicken inherits tendencies in the direction of quantity and quality of flesh, thus much is a valuable asset, but that does not suffice in itself. The breeder who is able to allow his birds a large amount of freedom, where is an abundance of suitable food, and is content with having fowls for sale over a limited period of the year, may, to some extent, ignore this question. That, however, is not the road to profit. Hence he must be prepared to find a substitutory method of treatment if he desires to widen his operations, in the adoption of which risks have to be taken. "It is a general biological truth that everything lives unto itself—not where it chooses, but where it can; not upon what it likes best, but upon what it can get," says Professor Davenport. Our business is to make the environment and food supplied conduce to attainment of the objects we have in view. Given the tendencies referred to, and without which our efforts cannot attain their full success, it is essential that the environment shall be favourable, conducing to that rapid growth necessary to the production of high-class table-poultry. The soil must be warm and kindly, dry and yet good in quality. Harsh land makes harsh flesh, damp earth checks growth, poor soil means greater cost for food. What may be done with facility in one place is often impossible—I do not like the word, but it is better to know the facts—in another. The best chickens are the result of inherited tendencies, plus conditions which are favourable. Any antagonism in these directions will affect the result.

These, however, are not enough. The food supplied needs to be of a nature that will tend to the production of flesh and to early maturity,

more especially where considerable numbers are produced, for there the supply of natural food becomes rapidly exhausted, and we are dependent entirely upon artificially supplied nutrients. Generous, within due limits, as to the nature of the food, for a rich diet is harmful in the long run, should be the hand of the table-poultry-breeder. After the first few weeks we do not desire to encourage much exercise, for that means increased combustion. Under these circumstances the breeder may take greater risks than if he were rearing chickens as layers or for stock purposes. He should not, however, seek to increase these risks. There will be quite enough without his doing so. He must learn how far he may go. The main point is that much depends upon inherited tendencies, and quite as much upon the natural reserve of vigour, as to how the chicks will stand forcing.

LAYING FOWLS.

On the other hand, it is evident for the development of the egg-producing quality growth must be on totally different lines. In the chick intended for supply of flesh food the duration of life is brief, generally speaking embraced within a few weeks, or, at most, a few months. Therefore, we may adopt methods that would be injurious in the former case. When, however, laying is the object, muscular development on the sternum and thighs should be much less. It is the stimulation of the ovarian organs that should be sought for, and whatever detracts from that will hinder the realisation of our desires. We want early maturity, but it must be that of the ovaries, for it is a fact that, generally speaking, pullets which begin to lay first are the more prolific. Given the tendencies previously mentioned, vigour of constitution to stand the strain is all-important. Such is largely dependent upon the heritage, upon the treatment during the embryonic and infantile periods, but equally upon constant exercise during the growing stages, for we want firm and hard muscle, as upon reduction of the skeleton, bone and feather, in order to avoid undue call being made upon the digestive organs for their maintenance and support.

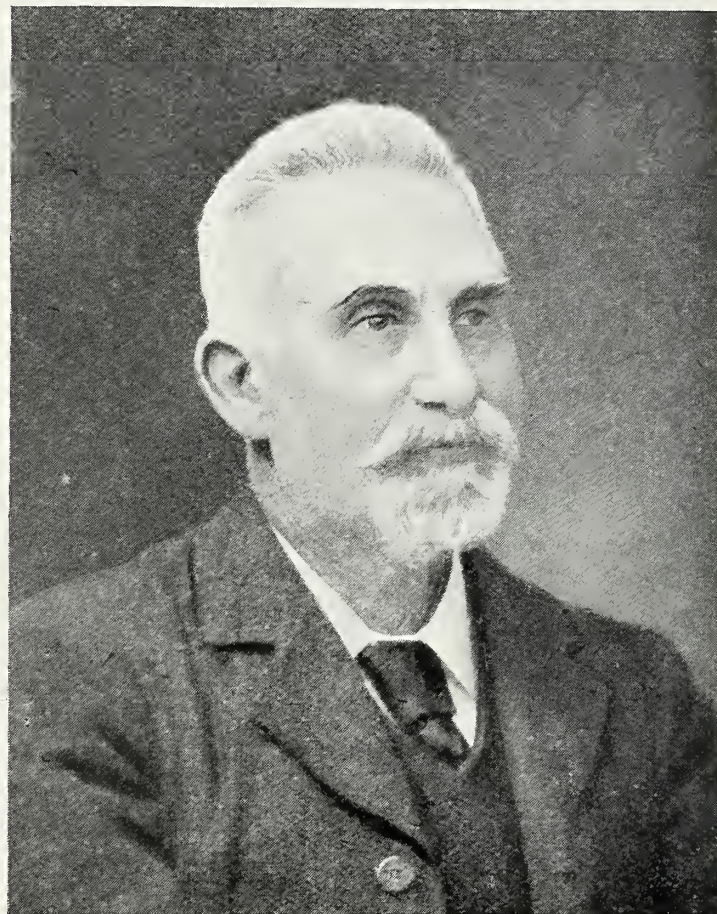
EXHIBITION POULTRY.

Finally, the chick may be grown into an exhibition fowl—that wonder of the breeder's art—in which what are otherwise minor parts of its totality are of supreme value, such as colouration of the plumage, &c., for with these vigour and productiveness are of lesser importance. To this end inherited tendencies are most powerful, but the most perfect of these may lose their effect by wrong treatment. That, however, opens a question it is not my present purpose to discuss.

WHO'S WHO IN THE POULTRY WORLD.

MR. W. H. GODWIN.

THE Rhode Island Red is making such progress in this country that we feel the time has come to include in our gallery of notabilities the breeder who was, we believe, its earliest importer into Britain—namely, Mr. W. H. Godwin, of Lugwardine, Hereford. That, however, is but the latest breed to be kept by him, for his operations have extended over a period of sixty-five years, in the course of which he has seen numerous changes and the rise and fall



MR. W. H. GODWIN.

of many breeds. He is one of the older type of fancier, being essentially a naturalist, with whom the fecundity, health, and stamina of a breed is of equal importance to its colour and markings.

There are not many, alas! now left to us who remember the old Cochin days, but of these Mr. Godwin is one. He recounts a single Cochin egg being sold for £20, and his reminiscences of that period would be read with interest. It was that which gave him the "hen fever," which when once contracted can never be cured. Ever ready to welcome new breeds, during later years he has taken up, in addition to the Reds, Plymouth Rocks, Langshans, Malines, Black Leghorns, and nearly all the family of Wyandottes, and his knowledge as a breeder has frequently led to invitations to act as judge at shows.

Naturally many of the developments in breeds have been against his wishes, and it is with great sorrow that he has seen the practical qualities of breeds sacrificed for that which is of no value. A further share in the promotion of poultry-keeping has been by his contributions to the Press, seldom, however, over his own name. Nor have his operations been restricted to fowls, for he has been a successful breeder of Hereford and Jersey cattle, of Shropshire and Rylands sheep.

MR. FREDERIK HANSEN.

AMONG the poultry-breeders in Denmark Mr. Frederik Hansen occupies a leading position. He is editor of the *Journal for Poultry-Breeding*, published by the oldest poultry society in Denmark—namely, the Society for Poultry Culture in Denmark. For the same society, founded in 1878, he also acts as secretary. Mr. Hansen, who for years was a member of the Standard Committee, acts very often as judge at Danish poultry shows, and is leader of a local poultry society on the Island of Fünen. He is an old poultry-breeder himself, and has for many years been a very successful breeder of Black Minorcas, which are highly appreciated by the practical Danish poultry-breeders. The Danish Minorcas are smaller of size, comb, and ear-lobes than the English, and many especially good strains are to be found. It is a matter of course that he for years has secured a very large number of the best prizes in the different poultry shows.

At his home at Assens, a little town on the Island of Fünen, Mr. Hansen has a small poultry-farm, and he is one of the advocates of the open-fronted houses. The house which is shown in the illustration is 12ft. long by 16ft. deep and divided into two partitions, accommodating one cock and eight hens each.



MR. FREDERIK HANSEN.

In the back of the house are placed the roosts and platform, and to every one of the compartments are 400 square feet runs planted with fruit trees.



Mr. Hansen is a great advocate of the open-fronted type of house. The above photograph shows the form he adopts on his own farm.

[Copyright.]

THE DAIRY SHOW.

THE FANCY SECTION.

By W. W. BROOMHEAD.

THE poultry section of the 36th Annual Dairy Show, held last month, was a most successful affair, and the entry (3,285) was the best that has been obtained at the event for the past few years. The live bird section opened with breeding-pens, and in the three classes provided for them there were 35 entries. Perhaps the best of the groups were the Buff Cochins, of which Mr. G. H. Procter staged the winning quartette; but both Mr. J. Wharton's Partridge Wyandottes and Mr. C. E. Pickles's Black Hamburgs were also much admired. Of Dorkings there was a good display, and on the whole this old breed held its own. Very few, if any, new names were in the lists, and, as usual, several of the prizes went to Scottish exhibitors, Mr. J. T. Cathcart (of Fife) taking the leading honours in Coloured and Silver Grey cockerels, while the latter bird secured the medal for the best Dorking. Langshans made a very nice collection, though scarcely as strong as they have been at the Dairy. The Black pullets were the most numerous, but some appeared to be rather late hatched. Mr. H. Wallis showed the best of the cockerels, and Mr. J. W. Walker the winning pullet, this latter bird also getting the silver medal. Blues were not over numerous, but both sexes were competing together, and the pullets had a distinct advantage. Major Barnes won in this class with one of the best pullets seen for some time. Croad Langshans came up very well, and for the first time for some years the same judge took the two varieties. Brahmas and Cochins were very disappointing. The class for Dark Brahma cockerels was cancelled, but some nice pullets were forward, and Mr. S. W. Thomas's third prize-winner was a particularly fine example of rich ground colour and clear pencilling. The Lights were a good lot, and the medal went to Mr. W. R. Garner's pullet. Three of the four Cochins classes failed to fill, and only nine turned up in the one that stood, for Any Other Colour pullet, but the medal winner of Dr. W. Royden was a charming White. It is perhaps early in the season for Cochins, and they will doubtless be strong at Birmingham.

Minorcas were about the same as regards quantity, although this year the cockerels were more numerous than the pullets. Quality was decidedly good all round, and well in advance of the birds shown at last year's event. Mr. W. H. Cook won the medal with a splendid cockerel, but Mr. A. M. Prain's pullet stood well at the head of her class of 25. The winning Houdans were "all there," but others in the class left much to be desired. Mr. S. W. Thomas won both the first prizes and the cup, medal, and extra prize. Faverolles came up well, and in the two classes for Salmons alone the entries were better than last year's total. The Whites—new classes this time—were well up to the mark as regards quality, colour, and general characteristics, and there appears to be a good future before this charming variety. Mr. C. Thel-

lusson won the medal and both firsts for cockerels, while similar awards in the two pullet classes were secured by Mr. G. Betts. There was an excellent entry of Campines, 21 more than at the 1910 event, and there was a distinct improvement in quality and size. The Rev. E. Lewis Jones showed the best cockerel, and Mr. G. Reiss the winning pullet, both being Silvers, but Mrs. Lewis Jones secured second prize in pullets with a particularly nice Gold, a variety that has not made much headway of late. Hamburgs were not very numerous, 41 in the six classes—but one never looks for quantity at the Dairy. The quality was right. Mr. R. H. Smith won both classes of Spangles, his team of Silver pullets being a good one, while the other first prizes were secured by Messrs. T. Clough and Turton and Son (Pencilled) and D. Govan and C. E. Pickles (Blacks), Mr. Govan's cockerel getting the silver medal for the best Hamburg.

Two of the four classes for Modern Game were cancelled, and those that stood had a total of 18. Mr. D. Wishart won the medal and both of the first and second prizes with the only four entries he made. There was a better display than usual of Old English Game, and, although one class was cancelled, the average for the six was not far short of 13, the total being 76; and nothing was lacking in quality. Mr. T. C. Heath won two firsts, but the others were divided among Miss R. B. Babcock and Messrs. J. Millican, G. Lee, and T. Garner. There was only one class for Black Sumatra Game, and it was not surprising that the entry was poor. Malays came up very well indeed, but Messrs. Teather and Fabian-Russell fairly "swept the deck," winning first, second, and third in cockerels, and special, first, and second in pullets, besides two or three cards. There was a fairly nice display of Indian Game, a dozen cockerels and seventeen pullets; Messrs. W. and J. H. Heys won both firsts, Miss Babcock both seconds, and Mr. W. Brent both thirds. Andalusians do not make much headway as a popular breed, but quality was well maintained, and both Mr. M. F. Porter's winning cockerel and Mr. G. Duckworth's pullet are birds of great merit. The collection of Leghorns was a decidedly nice one, although a much larger entry than this year's has been seen at Islington. The Browns were a very good lot. Mr. A. Widd won three of the four prizes for cockerels; but, although he missed the first, his second prize bird was a decidedly better specimen than that which the judge placed at the head of the list. Lady Derby won second in White cockerels, but the bird was chosen by many as the best in his class. With regard to the Whites, it is pleasant to remark that the in-kneed and crooked-toed specimens, too frequently seen of recent years, are fast disappearing. Blacks hold their end up fairly well now that the boom is over, although there have been stronger classes at the Dairy. Miss Babcock won the special with a pullet, but Mr. A. M. Prain's cockerel was also an exceptionally fine bird. There were rather poor entries of Buffs, Duckwings, Blues, and Any Other Colour, and Rosecomb Blacks. Miss

N. Edwards won the special for Buffs, and Miss Babcock that for Duckwings, while the special for Blues went to Mr. R. Cape, and for Any Other Colour to Mr. E. L. Simon's Pile, in each case cockerels having the preference.

Plymouth Rocks again made a grand display. In Barred the marking was exceptionally fine, but many of the cockerels had unfortunately moulted their tails. There were 49 entries in the two classes, and the medal went to Mr. R. H. Milner's pullet. The cockerels were the better of the Buffs as a whole, but Messrs. G. and E. Atherton's pullet rightly won the medal. White cockerels and pullets were not numerous, a score between them, but there were some rare good birds on view, and better than the winners of Mr. C. Thellusson have never been seen. There was a splendid turn-out of Wyandottes, although here and there numbers were down. Mr. O. F. Bates staged a rare team of Laced, and won both of the firsts and seconds for Silvers, as well as similar awards with Golds, thereby probably creating a record; and his Gold pullet also stood in for the champion cup for the best fowl (other than water-fowl and bantams) in the show, and carried it off with ease, since she is the best of her kind seen for many a long day. Whites were very numerous, but type requires attention, since beyond the winners there was too much variation. Mr. C. N. Goode won both firsts, and both cockerel and pullet stood well out. Blacks made a very nice show, but here again type leaves room for much improvement. Mr. J. A. Glover had a strong team forward and won cup, special, first, and third in cockerels, and second, third, and fourth in pullets. Partridges still hold their own, and Mr. R. Watson continued his successes with the variety by winning special, first, second, and third in cockerels, and third and reserve in pullets. Mr. J. Wharton held his own in Silver Pencilled; although there were only four cockerels entered, there were about a dozen pullets, and in the latter class the winner was possibly the best that has been seen so far. Columbians were decidedly numerous, about fifty in the two classes; and something of an improvement was to be seen in the variety. Mr. T. Welch won in cockerels, and Mr. H. Wright in pullets, but Miss Peel Holmes exhibited some excellent birds in both classes, and in the cockerel class particularly she had "hard lines." Blues were as good as Blues have been, and that is not saying much, while as to Spangles, they are still in a very elementary stage. Mr. R. Watson won with Buffs in the Any Other Colour Wyandotte classes, which included Pile, Blue-Laced, Buff Laced, and Red.

There were 376 entries of Orpingtons in the ten classes provided for the breed, and of them 343 were whole colours. It was truly a great display. Blacks opened with 84, and there has never been better quality at any show. The variety has been going downhill of late, but the turn-out at the Dairy should give it a good start once more. Mr. J. C. Shanks scored very well in both classes, and the birds stood clean out. Mr. W. M. Bell showed a trio of each, but they were almost too backward; however, quality was there. Of Whites there were 63 cockerels and 85 pullets, and the judge's task was a most unen-

viable one. Mr. O. F. Bates showed a strong team of cockerels and won first, third, and fourth, and each was a typical Orpington. The pullet awards were not endorsed by all; in fact, many of those fanciers who "went through" the class failed to follow the judge; but 73 fowls of the same colour—there were twelve absentees—and that colour, White, wants some judging. One of the very best birds in the class was left cardless, but why? Buffs made a fine show with 52 cockerels and 60 pullets, and in the former class Mr. W. J. Golding won well, while it was pleasing to find Mr. W. M. Bell back in the variety again, and securing a good second. Most of those "in the know" thought that Mr. E. A. Cass would follow up his Hayward's Heath successes, and beat all comers at Islington, but it was really most unkind of him to stage three birds good enough to win first, second, and third in one of the very strongest classes that has ever been seen!

Jubilee Orpingtons keep up well, and competition remains keen. Captain Max de Bathe won both firsts for the variety, as well as second in cockerels, and the challenge cup over the Spangles. Messrs. William Cook and Sons had the best of the latter variety, securing both firsts.

"British Rhode Island Reds" were certainly numerous—thirty-two in each class—but they do not appear to have made the advance that some fanciers expected. After all, that is just as well, since if perfection were achieved at once what would become of the R.I.R. Club? The breed is coming on, and, thanks to the club, it has made quite quick enough progress. Of Sussex fowls there was a very nice display, and the collection was about as strong as at last year's event. Messrs. John Baily and Son entered on a large scale, and they won the Sussex Poultry Association's silver medal for the best Sussex, in addition to first in Red cockerels, second and third in Light cockerels, both firsts in Speckled as well as third in cockerels, and second in pullets. The Lights shown by Mr. William Hodges repeated their Hayward's Heath wins, and added a third in pullets, and a finer lot of pullets than those which won first, second, and third for him has not yet been seen from one yard. Anconas were more numerous than at last year's event, the total being 37 for the three classes. Mr. T. Whittaker took first and second in s.c. cockerels, and Mr. J. Eadson special, first, second, and fourth in pullets, while Messrs. A. and J. Smith had the best rosecomb, a really smart pullet. Silkies were not quite as numerous as usual, but some nice birds were staged. Mr. C. Thellusson won first and third in cocks, and second and third in hens, the first in this latter class going to Mrs. William Rice, and quite a charming little hen she was. There can be no question that Yokohamas are coming ahead, and the turn-out at the Dairy—thirteen cocks and fifteen hens—was a most satisfactory one. The Rev. C. H. Hildebrand entered three of each sex, and won second in cocks and medal, first, second, and third in hens with a very choice lot of Duckwings, a rare cock of the same variety gaining first for Mrs. L. C. Prideaux.

The Selling Classes were a show by themselves, and here again there was a strong entry of Orpingtons and Wyandottes. There was a splendid display of

Bantams, the numbers being especially good. It was in this section that the champion bird of the show was penned, and Mr. O. F. Bates won the B.D.F.A.'s gold medal—the best of the 3,000 odd live birds staged—with his famous White Pekin cock. Of the different breeds of Bantams exhibited the entries were as follows:—Modern Game, 119 in eight classes, the special going to Mr. J. Brennand's old Black Red cock; O.E. game, 61 in six classes, special to Miss R. B. Babcock's Duckwing cock; Malay, 63 in six classes, special to Mr. W. Arkwright's Spangle cockerel; Yokohama, 17 in two classes, medal to Mrs. Jeaffreson's Grey hen; Rosecombs, 27 in four classes, Mr. Edwin Wright winning both firsts in Blacks; Pekin, 22 in two classes, silver medal and special for best Bantam going to Mr. Bates's White cock; Japanese, 32 in two classes, first in cocks to Mr. P. D. Williams and in hens to the Rev. Dr. Hurst; Frizzles, 13 in two classes, Mr. G. S. Allen winning in cocks and Major G. T. Williams in hens; Sebright, 49 in four classes, Mr. A. R. Fish getting both of the firsts and seconds in Golds, Miss K. D. Preston winning in Silver cocks, and Messrs. W. and J. H. Heys in hens; Scotch Grey, 12 in one class, and first going to Mr. J. McCrae's charming pullet, that was left out at Hayward's Heath; and Any Other Variety, 30 in two classes, the firsts being won by Messrs. W. and J. H. Heys's noted Partridge Wyandotte cock and Mr. E. W. Davies's White Polish pullet.

The Waterfowl section was well patronised, although two classes—one for Aylesbury duck bred in 1911—were cancelled. Mr. J. Y. Wheatley won the silver medal for the best drake or duck with his Aylesbury 1911 drake, and also the medal for the best gander or goose with his adult Toulouse, which also appropriated the champion cup for the best pen of waterfowl. In Turkeys, of which there were 49 in six classes, Mrs. Irene Osgood secured the silver medal with the best Bronze cock which has been shown for years, while Captain Max de Bathe had an easy first in a strong class of White cocks, Mrs. Inge won in White hens, Mr. L. F. Maycock in Bronze hens, and H. J. Cattell both firsts in Bronze bred in 1911.

TABLE-POULTRY AT THE DAIRY SHOW.

By H. M. C.

WHILE it is true that some remarkably fine birds were staged, the show, taken as a whole, was disappointing. Some of the classes were poorly filled, especially in the case of those for Dorkings, while many specimens were exhibited which really had no business to be there at all. On the other hand, we were pleased to note an almost entire absence of gross fat, which is so often seen in show birds, and which is so very objectionable a feature. There was, too, a considerably greater evenness in the couples. In former years we have called attention to the fact that a couple of chickens should match as nearly as possible. Rather than send one very large and one very small bird, it is much better to send two small ones. Quality always counts, or should count, more than size, and this fact should never be lost sight of in exhibiting, or even in marketing, dead poultry.

The class for a couple of Dorking cockerels was very disappointing. There were only four entries, one of which was absent. Only one prize, the first, was awarded, this going to W. A. Smith. The quality of the three exhibits was not up to the mark, there being a coarseness which was far from pleasing. The three couples of pullets were of much better quality, and were more nearly up to standard. T. Moss gained premier honours, while W. A. Smith was awarded second prize. The two classes for Sussex fowls were well supported, and contained some excellent birds. It is rather significant that the Dorking could only muster six exhibits, while there were no fewer than twenty couples of Sussex. W. H. Edwards was awarded first prize and two silver medals in cockerels, whose birds are illustrated on the next page, and F. W. Wheeler first prize and one silver medal in pullets. By far the most successful exhibitor in the table-poultry section was F. H. Wheeler, who almost "swept the decks." For instance, in the two classes for Sussex he was awarded one first prize, two seconds, and one third. The Sussex fowls, both cockerels and pullets, were very fine indeed, some really superb specimens being staged. The cockerels were perhaps rather better than the pullets, both as regards size and colour.

There was a very good display in the two classes for Any Other Variety, 19 entries in the class for cockerels and 13 in that for pullets. In the Cockerel class some very fine birds were included and some very poor ones. F. H. Wheeler again obtained first and silver medal and second, while Thomas Moss was third. Other breeds represented were Plymouth Rocks, Faverolles, Malines, and White Faverolles. It is interesting to note that out of the nineteen entries no fewer than thirteen were Orpingtons. This speaks volumes for the popularity of this variety. The pullet class was fairly good, but many of the couples were uneven, while a few lacked size and quality. Frank H. Wheeler again occupied first position, W. A. Smith second, and T. P. Hartley third. There was in this class a great preponderance of Orpingtons, of the thirteen entries eleven being of this breed.

The cross-bred classes were very interesting, and, on the whole, they were quite up to the average. There were eight entries in the Dorking-cross cockerel and only four in the pullet classes. W. H. Edwards secured first place with his cockerels, also the gold and silver medals, and first and silver medal with pullets. The same exhibitor was second in both classes, while in cockerels James Frome was third and in pullets C. H. Brewer. In all cases Mr. Edwards' birds were of the Game-Dorking class; the only other cross represented was the Dorking-Buff Orpington. There was a good display numerically of Cross-bred cockerels other than Dorking, but the quality was disappointing, some of the birds being coarse and of poor colour and texture. A few couples were splendid, and these had the effect of showing up the poorer ones in a rather unsatisfactory light. F. H. Wheeler was first with a pair of Indian Game-Buff Orpington, the Earl of Plymouth was second with a similar cross, and the Duchess of Manchester was third with a pair of Indian Game-Speckled Sussex. The pullet class was excellent in every respect; it was undoubtedly the best in the show. F. H. Wheeler was first and second again with Indian

Game-Buff Orpington, and the Earl of Plymouth was third with the same mating.

The class for a Couple of Pure or Cross-bred Ducks contained some very good specimens. It was a capital class on the whole. The birds were fairly large, of an excellent colour and quality, and had been well prepared. S. Deacon was awarded first and second

classes. The cockerels, on the whole, were good, and it is interesting to note that nearly all the birds were cross-breds, very few pure breeds being shown. G. O'Grady was first with Game-Faverolles and second with Light Sussex, while P. Fricker was third with Indian Game-Buff Orpingtons. The pullets were rather better than the cockerels, their quality and



**1st Prize, Gold and Silver Medals,
Game-Dorking Cockerels.**

**1st Prize,
Cross-Bred Ducks.**

**1st Prize and Silver Medal,
Sussex Cockerels.**

places with cross-bred drakes, and W. E. Reading third with a pair of Aylesburys. The Goslings were poor, though the class was well supported. Mrs. Edwards won first and second prizes and F. Read third.

Three special classes were provided, two for chickens and one for ducklings, which were confined to farmers

colour being a little superior. T. Statter was awarded premier honours with a pair of Buff Orpington-Buff Rocks, I. Y. Wheatley second, and Mrs. Nightingale third with Dorkings. Other varieties and crosses which were shown included Aseel-Buff Orpington, Indian Game-Buff Orpington, Indian Game-Wyandotte,



**1st Prize and Silver Medal,
Game-Dorking Pullets.**

**1st Prize and Silver Medal,
White Orpington Cockerels.**

**1st Prize and Bronze Medal,
Cross-Bred Pullets.**

and cottagers, being bonâ fide rearers of chickens fed under natural conditions, but not crammed. The birds were of very uneven quality, some very good ones and some very poor ones being shown. So many of the birds lacked size, while several couples were of extremely poor quality. This feature was excellently supported, there being fifty-seven entries in the three

and Speckled Sussex. The ducklings were not altogether satisfactory, and had every appearance of wanting fattening.

We describe on another page the extremely interesting display of appliances at the Dairy Show.—Ed. I.P.R.

EGGS IN WINTER.

TO secure a supply of home-laid eggs during the winter is the ambition of every poultry-keeper who recognises that his birds have an economic value. Unfortunately, some are not yet very successful, though in most instances the disappointment may be traced to a waywardness of the owner rather than to inability in the birds, for there is a class of men who, either from love of experiment or some equally obtuse cause, refuse to adopt the methods that others profit by. But even among the last-named section, those that profit by following good advice, there is a discrepancy of results that ought to be bridged over and a higher general level attained. Winter laying is, in effect, a natural process developed and sustained at an unnatural period of the year, and those who realise this most fully, and set out their plans accordingly, are the ones who achieve the greatest results. Within

shape, brilliant plumage, alertness, and the fretful outbreaks of impatient cackle that they are not far off the laying point. Remember, however, this is a critical period of their existence, and it is not the spring time that is drawing on them with its wealth of fresh plant growth, abundant insect life, lengthening days and sunshine, and a genial invigorating atmosphere. These are what their nature craves for and, in the proper season of laying, would get; but, instead, they are to encounter a chill barren earth, sombre dank fogs, biting frosts in the long nights, and fitful gleams of sunshine interspersed with snow or cold, sleety rain. The contrast seems too great for the possibility of egg production, but care, thoughtfulness, and common sense will go far to delude, or rather induce, the birds to follow the course they are wished to take.

Having pointed out the winter's discomforts and the need of overcoming them by some approach to the



A WINTER LAYING-HOUSE ON AN AMERICAN FARM.

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reasonable limits, it may be taken for granted that any full-grown pullet, whether pure-bred or mongrel, will lay eggs if the natural tendency is promoted and the unnatural element overcome. The great factors in securing this combination are: Hatching at the right time, rearing properly, and correctly housing and feeding when the age of laying draws near; the neglect of any one of these is wholly fatal to the end in view. If, in addition to these points, the inherited instinct of the pullets is to lay many eggs with but a short interval of rest between each, it is an obvious advantage. This is where "laying strain" scores so heavily, and to it is due much of the discrepancy mentioned.

At this time of the year the housing and feeding will be the important features, and, assuming the hatching and rearing to have been duly and efficiently accomplished, the pullets should, in October, be sufficiently matured and should bear evidence by their

conditions spring would afford, the appended hints may be found most useful towards securing the desired end. The sleeping house must be dry in all parts, substantially built of good thickness timber, and draught proof, but not utterly devoid of ventilation, which should take place at a higher level than the birds are at when on the perches. It should be neither too large nor too small for the number of inmates, and the estimate of accommodation should be 10-12 cubic feet of air space per bird. If an open-fronted scratching shed is provided—and this is a valuable auxiliary—the earthen floor of it must be kept dry, for at this season, if it gets wetted by driving rain, it remains damp for weeks, and may then be more harmful than otherwise. Here, a loose canvas screen that can be instantly run across the wire netting front is an acquisition, since it keeps out rain, snow, and rough wind, while allowing enough light to pass through for the birds to scratch by. On

an average of 10 square feet of earth floor per bird the denizens of a covered shelter may be confined for a week or more at a time when the exigencies of the weather demand it, and they will be happy, healthy, and productive—but the dryness underfoot is essential.

The food supplied at this season must be of good quality and bulky, for it should be borne in mind that little or no sustenance is obtained by foraging, and on the diet largely depend the completion of the growth of the bird and the contention with adverse weather. The morning meal, given soon after daybreak, should be of warm soft food, and if it varies from day to day so much the better. Among the changes possible the following are recommendable as bases: Biscuit meal soaked in hot water for 10 minutes; small or "chat" potatoes freshly boiled, drained, and mashed with the garden rake while hot, adding a little fat; maize meal steeped in boiling water overnight or at least two hours before using; table and cooking refuse (except bread) boiled overnight with a little sound cheap rice; bread scraps soaked in warm water and drained. To each of these bases put granulated meat meal—a quarter-pint to every eight or ten birds—letting it soak or boil with the other, then stiffen the whole to crumbliness with coarse middlings (sharps).

Where pea-meal or bean-meal is procurable it may take the place of meat occasionally, but neither is as satisfactory as meat, nor as cheap. Fresh meat in the form of horse-beef, lights, liver, trimmings, &c., is not always handy, but when obtainable is better than the granulated meat; cut green bone is another passable substitute when freshly prepared. Season the soft food slightly with salt. When a grass run is not available, or weather forbids its use, a little greenstuff should be supplied. The afternoon meal should be of hard sound corn, wheat, barley, oats, maize, and a mixture of half oats and half maize. Change these about almost daily, and when the birds have to scratch for it, it should be distributed some time before dusk, so that they may gather a full feed before going to roost.

W. R.

AMONG THE BIRDS IN NOVEMBER.

By J. W. HURST.

GETTING READY FOR CHRISTMAS.

So near are we to the climax of the year's production that during this month we enter upon the final stages of preparation for the attainment of the best marketable condition in produce that is to be disposed of during the week preceding the Festival. Size and appearance are the chief characteristics required in poultry for the Christmas market. Turkeys, geese, ducks, and fowls—capons or otherwise—all must appeal to the eye by their generous proportions; birds of mean appearance have less chance at that season than at any other, and the turkey with the crooked breast or the fowl torn in plucking will be more profitable if retained for home consumption. The turkeys should now have soft food mixed with milk (if possible), and suitable ingredients for mash mixtures include barley-meal, sharps, fine wheat meal, mashed

potatoes, and buckwheat-meal. Sussex ground oats should be used for the better-class production, and small quantities of whole peas are a useful addition in the present feeding of these birds; whilst a little later, mutton fat should be included in the soft food mixture. Roots should also be allowed. Geese will rapidly improve in condition if fed upon barley-meal and brewers' grains, but they require a supply of vegetable food; and grain should be fed in the water troughs with grit—preferably as a mid-day meal. This latter remark applies equally to the special feeding of ducks, which should also, of course, include a fattening diet of soft food.

WINTER EGGS.

The immediate necessity of those who keep laying stock is the production of winter eggs, which has been the presumable aim of the previous breeding and rearing in this department of work, but the yield will not come up to expectations if the efforts of the poultryman are in any essential relaxed at the commencement of the cold season—when fowls are not naturally disposed to lay. Despite the arguments that have been put forward on the other side of the question, I do not find any sufficient reason for the reversal of the old order of feeding, and it is my experience that a warm mash breakfast is the best for the layers—actual or prospective—at this time of the year. I am inclined to the opinion that it is over-feeding, and not soft feeding, that is at the bottom of the objection to mash food in the morning, and the regulation of the required quantity demands careful consideration on the part of the feeder. There is, on the other hand, the danger of bringing the birds to the beginning of their laying season in an over-fat condition; and there is, on the other hand, the risk of forgetting or incorrectly estimating their increased needs when they are in full lay. It is, of course, true that circumstances alter cases, but I have obtained the most consistent results from free-running laying stock in winter when feeding on warm ground oats, sharps, and meat; with a good feed of oats and wheat, alternately, in the evening.

INCUBATION.

For the practical purposes of table-chicken production incubation usually commences next month, following a very general present lull in this branch of production; but although November is not commonly considered a propitious month for hatching, it is a favourable period for the completion of preparations and for the continued maintenance of vitality in the breeding stock. Relative to the latter essential, I would emphasise what I said last month by pointing out that the use of stimulating foods in sufficient quantity to force egg-production is very likely to destroy vitality in the production, which is also influenced by the housing and general surroundings of the breeding stock. To maintain this quality of vitality, the eggs must be incubated under favourable conditions, and the nesting-place must be selected with a view to the preservation of this characteristic; the nest must be carefully constructed and the brooding instinct fully developed in the sitting hen. Where the conditions are carefully considered and regulated a higher percentage of vigorous chickens will be secured by the natural method of incubating, but strong vitality in stock and eggs will greatly improve the results obtained by the use of incubators.

AN OPEN-FRONTED POULTRY HOUSE.

By S. L. HURLEY,

Secretary Sanitary Inc. Co., Elmira, N.Y.

IN presenting these house plans it is with confidence that they will meet with the approval of your readers in actual practice. They are not the result of a theory, but a composite of the good points only of many different houses that I have used in the past twenty-five years. In this time I have adopted various plans, but none with such satisfaction and success as the one that I will try to describe.

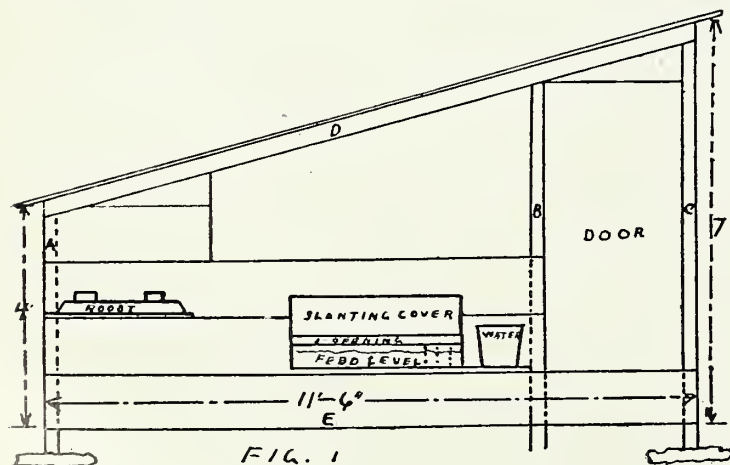
Some houses are perfect for summer use and a complete failure in winter. Another open-fronted type that we often see is just right for winter, but very close in summer, not open enough for roosting in at night.

Scratching-shed houses have done well for me, but the cost per fowl for housing is nearly double. Both house and shed have of necessity to be built large enough for the whole flock, as they seldom make use of more than one at a time.

Alleyways, while convenient, are a luxury that most of us cannot afford. In this house a three-foot alleyway would reduce the capacity about twelve fowls or six to each pen.

The attached plan is a single unit of a complete house which may be extended to any length as a continuous building. In my house there are two units, making four breeding-pens, each of sufficient capacity for twelve to eighteen fowls, depending on variety. If desirable to use this as a laying-house only, simply fasten doors open and place feed and water on centre partition.

In extending this house to a continuous building of several pens it would be advisable to have an out-

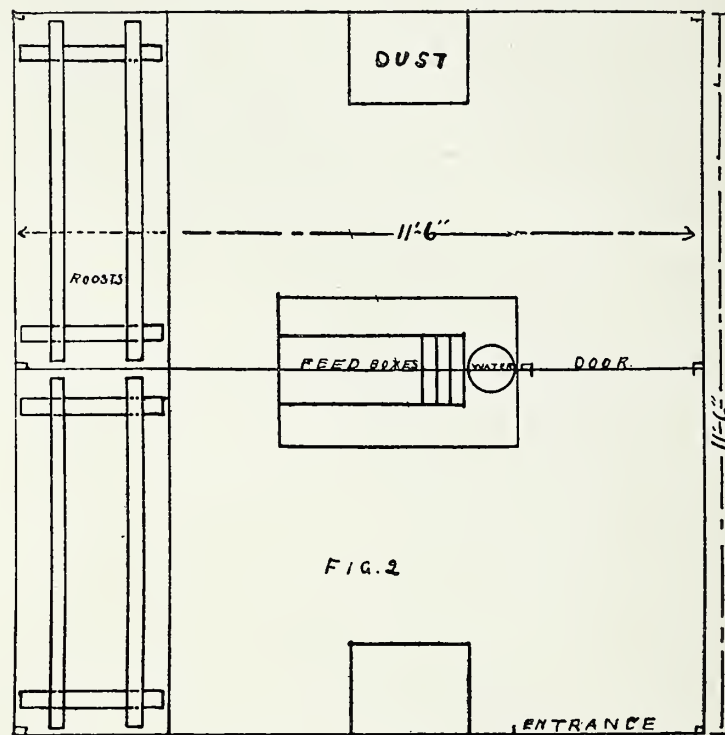


side door about every fourth pen. It would then be convenient to reach any particular house without going through several doors.

Many little details, such as size and shape of yards, style of feed boxes, water dishes, &c., can be made to suit your own individual fancy or needs, but this house, on the whole, you will find very satisfactory as to economy in first cost, health of

fowls, egg production, and ease in caring for the stock.

Figure 1 is an elevation of centre section. Rear post, A, is cut 4ft. 6in., and front post, C, 7ft. 6in. long. Three of each are needed and will cut without waste from three 12ft. 2 by 4's. Post B, cut 6ft. long, two will be needed, one for partition door and

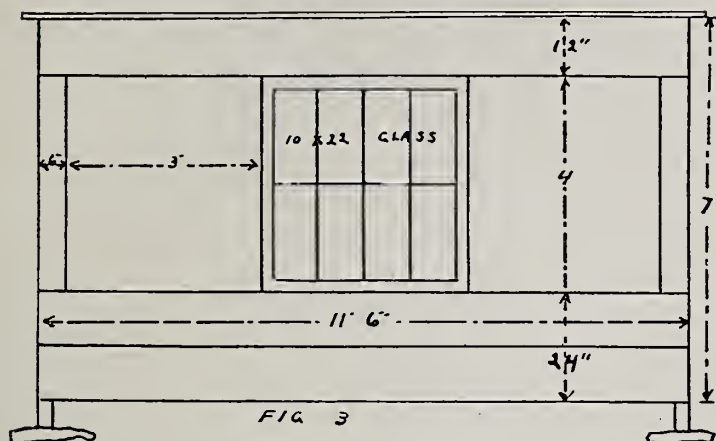


one for door at entrance. A 12ft. 2 by 4, D, will make the rafters, and a 12ft. board 12in. wide, E, at bottom of posts will take the place of sills, an important economy in this house. Three of these bents should be put together while flat on the ground; one to be boarded solid, another with 30in. door for entrance, and the third for centre partition, as illustrated. In each one a 12in. board must extend the entire length of bottom to take the place of sill. This board, E, should be nailed to post A 3ft. 8in. from the top, and 6ft. 8in. from top of C. This, when the rafter is laid, will make the house 4ft. in the rear and 7ft. front. A higher house would be more convenient to work in, but not satisfactory for best results. Posts A and C will extend 10in. below bottom of board E, and should be set on flat stones so that it will be necessary to fill in not less than 8in. of soil under the entire house. This will insure a dry floor, which is important.

Centre partition should be boarded 3ft. high and solid to the roof at the roosting platforms. The balance may be covered with wire netting.

I place a platform 3ft. by 4ft. in centre partition on which is placed double feed and grit boxes constructed to be accessible from either pen. For water a 10-quart galvanised pail set in centre of partition will answer for both pens. These pails should be sterilised often with boiling water and are very easy to keep clean. This platform, being placed on top of the first 12in. board, leaves the entire floor space for scratching room, and places the feed and water where no filth or litter can be thrown into them.

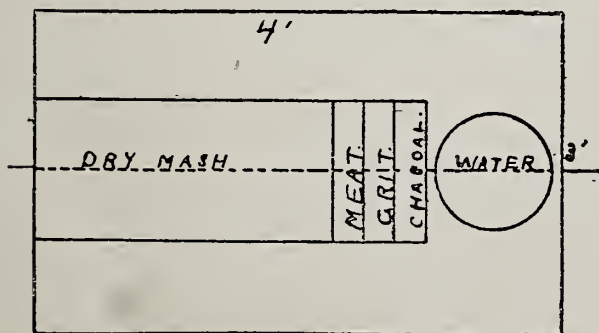
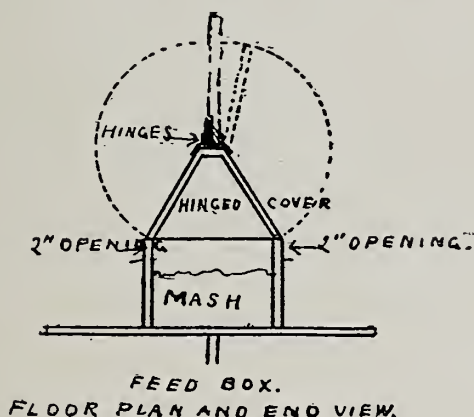
Figure 2 is a ground floor plan of house and is self-explanatory. Roosting-poles and supports should be made removable for ease in cleaning and fighting mites. Orange boxes make good nests and are cheap. They must be in semi-darkness to prevent egg-eating, and this is best accomplished by placing them under



the roosting platform and tacking burlap to the edge of the platform, leaving about a foot open at one end.

Figure 3 is a front elevation, two 12in. boards at the bottom and one at the top. Corners cased with 6in. boards and 4ft. opening covered with 1in. mesh wire net.

This opening is all right for summer, but too cold for winter. At the first sign of cold weather I put



an 8-light sash 10 by 22 glass over the centre partition, which gives four glass lights for each pen.

Hinged frames covered with canvas must be provided for remaining openings, but seldom closed in the daytime except to keep out storms. I prefer

canvas to muslin, as it keeps out the wind and storm, and at the same time admits plenty of fresh air. Muslin when damp is nearly air-tight.

For the roof use a two-ply asphalt of some reliable make. I cover the sides with rosin-sized building paper; over this tack one thickness of old canvas and paint this heavily with pure Portland cement, keeping it damp for a few days until thoroughly set. This makes a very attractive building, and I have had several people mistake it for solid concrete. I have also used this material for roofing with some success, but now prefer the regular asphalt roofing for an absolutely water-tight surface. One-ply roofing is a very satisfactory covering for sides and easily applied, but not nearly as attractive as the cement and canvas.

Constructed of cheap, rough timber, this building will cost for material about £4; by doing the work yourself will cost a little under 2s. 6d. per fowl capacity. Matchboarding will make a more rigid building, and cost about 15 per cent. more.

Whatever material is used always remember that three sides and roof must be as near air-tight as possible, to get best results from open front. Don't close canvas front at night while temperature is above 30deg., and if at any time the least frost is noticed on inside walls it is an indication of poor ventilation, which may be remedied by opening canvas frame a few more inches.

I also use a curtain in front of roosts, but it is never let down unless very cold and windy, with temperature near zero. — *The American Poultry Advocate*.

THE AGE OF BREEDING STOCK.

THE danger of breeding from immature stock is one that must be guarded against. The danger is always present, despite the fact that it is brought prominently before poultry-keepers every year. Special attention should, however, be paid to the matter before mating the birds for the approaching breeding season, since, owing to the excessively hot weather that has prevailed throughout the entire summer, the young birds have developed very slowly. This is always to be expected during a long period of drought. The danger, therefore, of breeding from immature stock is intensified to a considerable extent. Fewer people err in this direction during such a season as 1911, for the simple reason that even the least experienced of poultry-keepers select the largest and best grown from their own stock, or, if birds are to be purchased, they will have none but well-developed specimens. If, therefore, they are well forward now to have attained this condition they must have been early hatched, whereas during a wet season the same size may have been reached, and yet the bird may be a month or even six weeks younger. This guide as to the time at which they were hatched, however, is only existent if the birds—cockerels especially—are purchased at the present time, since every week that passes after the beginning of November makes the task of determining when they were hatched more difficult. The purchasing of cockerels is usually delayed too long; in fact, it is often done on the very

eve of the time that they are required for the breeding-pen. This is a mistake. The necessary male birds should be obtained in sufficient time not only for them to become accustomed to their changed condition, but because the chance of getting cockerels that were early hatched is considerably greater.

It is necessary to have age in one of the parents, preferably on the mother's side. Doubtless, for ordinary economic purposes, good healthy two-year-old hens mated with a strong, well-reared, and early-hatched cockerel will produce a greater percentage of fertile eggs and more robust chickens. It is not, however, every year that this can be done, since the pullets are to be bred from each alternate year. The same thing applies to the selection of pullets as to the selection of cockerels—namely, early-hatched and well-grown specimens only should be chosen to run with a two-year-old male, one that has been well kept during the winter, and has not been run with hens since the finish of the previous breeding season. The progeny of this mating, while perhaps not growing quite so quickly, will produce a little later in the season excellent chickens, especially where breeding layers are concerned.

This question as to the age of breeding stock is one that is not sufficiently considered. The mating of too young stock is responsible for much of the trouble that is complained of every season. There are many causes responsible for the infertility of the eggs; many theories why chickens are found dead in their shell, and the high mortality in chickens that have been hatched. One of the chief reasons for all these disasters is doubtless that of immature mating. This danger is understood, and is guarded against in other farm stock; but seldom, indeed, does the farmer realise that the same principle applies equally to the breeding of poultry. It is necessary that the importance of this matter should be fully understood so as to ensure the breeding of hardier and more prolific fowls.

An Old Story.

Mr. D. F. Laurie, writing in the *Journal of Agriculture for South Australia*, says:—"At no time have the merchants in this State endeavoured to put a stop to the traffic in eggs which are quite unfit in any form for human consumption. Until a course of vigorous and, if necessary, drastic action puts an end to this traffic our poultry industry will be hampered. Some few shops of late have made special efforts to supply their customers with genuine fresh eggs, but the bulk of the trade eggs are far from satisfactory. About three years ago the Sydney health authorities threatened drastic action in regard to South Australian eggs, and yet we are told that the trade needs no supervision. In the summer months, if one buys a dozen eggs at each of twenty stores, in 90 per cent. of the cases he will find a big proportion of stale eggs and many quite decayed. Unfortunately, the average person regards such eggs from a humorous standpoint—unless upon the platform. Vigorous action would, in time, reach to the culpable farmer as well as the trader. Our industry would be far better without these eggs and those who deal in them."

DEPÔT DISCUSSIONS.

By J. W. HURST.

THERE can perhaps be no more appropriate and interesting—and, one would dare hope, profitable—manner of celebrating an important anniversary in the history of an egg and poultry society than the holding of a conference and the discussion of questions with which all are concerned, and upon the correct solution of which the prosperity of the society largely depends. Moreover, the relation of experiences has in such circumstances a far-reaching effect to the extent of the influence exercised upon other inquiring minds, who may be encouraged to pursue a similar line of action or may be warned off the course—as the case may be. It was therefore in a spirit of anticipation that I gladly accepted an invitation to take part at the celebration of the tenth anniversary of the opening of the Street and District Collecting Depôt. Although participating to a limited extent in the teaching part of the programme, I was more anxious to learn—and that, I think, was the general attitude of the assembly. The experience of those present was of a varied description, and each added his modicum of fact to the fund of common knowledge—wherein lies the practical advantage of a gathering of this description.

It was very pleasant to hear some of the introductory speeches, and one was glad to note the interest displayed by Mr. Henry Hobhouse—particularly as that gentleman spoke as the Chairman of the Somerset County Council; it was also especially gratifying to listen to the remarks of Sir Edward Strachey, whose position as Parliamentary Secretary to the Board of Agriculture lent additional weight to his words. That such occasions are used to speak to a larger audience, through the agency of the Press, is part of the general scheme of things; but it is at any rate all to the good that prominent representatives of the Government and of local authorities should thus show and express sympathy with the aims of co-operation and of those who seek the advancement of the British poultry industry.

The subjects discussed were admirably appropriate, but without entering too closely into details a few points of view may be recorded as illustrative of the general value of depôt discussions. Egg producers as a body may, for example, find food for reflection in Mr. Reynolds' statement that: "While eggs at 8d., 10d., and 1s. per dozen provided a satisfactory margin to the owner of the fowls laying in April, March, and February, 1s. 4d., 1s. 6d., and 1s. 8d. per dozen in November, October, and December were not sufficient to compensate for the cost of shelters, scratching sheds, food luxuries, and special attention necessary to get winter supplies." The argument being in favour of improved prices, Mr. Gerard Kitson advanced the opinion that these would inevitably result from the supply of guaranteed new-laid eggs, which was the aim of the British Poultry Federation. There is, of course, the other point of view—emphasised by Mr. Edward Brown in his interim report on the German poultry industry—to the effect that although improved quality stimulates consumption, enhanced prices tend to reduce sales. It would be interesting to learn how far co-operators and federalists think

they can force prices without reaching the limit that would check the demand for golden eggs. That is an extension of the subject that requires careful consideration, and at some future *Depôt* discussion there should be room for a paper on "The Possibility of Reducing Cost of Production," which is another point of view.

Mr. Brian T. Mennell (of the Irish Department of Agriculture) advocated the method of dealing with eggs by weight rather than by count, as already practised in some parts of Ireland, and made a point of the fact that as weight is lost by evaporation the producer would market quickly; but Mr. Edward Brown drew attention to the obstacle presented by custom, and the danger to quality that might result from an undue insistence upon or encouragement of size. The importance of quality in eggs may be readily admitted, but inasmuch as quality means more than freshness, the subject is not so easily within the grasp of the average man as is the question of size. In this connection the egg standard of the Utility Poultry Club does not help us overmuch, the scale of points allotting forty to freshness and the remainder to externals, although certain tests are "suggested" as regards the contents. The next *Depôt* conference might very well include the discussion of "Quality in Eggs: What it is: How to Produce and Maintain it." At this rate one could soon draw up another programme, so easily does one conference suggest another. It is evident that a Poultry Parliament need never lack subjects for debate.

Dealing with the very practical subject of "Laying Strains and Their Improvement," Mr. Ralph Dixon (Worcestershire Poultry Farm) dwelt upon the necessity for in-breeding and the concurrent importance of health in the stock. The kernel of his argument was that breeding should be kept in the same family as long as possible, avoiding incestuous unions, but that at the first sign of degeneration fresh blood must be introduced—a course that was confirmed by Mr. A. D. Allen (the Wiltshire C.C. expert), who exemplified methods of mating from his own experience. Discussions around this subject are badly needed wherever egg producers can be assembled together. The doctrine of strain has been widely taught as an essential principle of egg-production for some time now, but I very much doubt whether—apart from the specialists—any considerable number of producers know very much about the working details, or, indeed, of the practical possibilities and limitations of the general laws of breeding for utility purposes.

Owing to the fact that the scope of the Street *Depôt* is wider than most, there was room for some discussion regarding the rearing of chickens for table—concerning which the interest is less general than the economic position demands—and I was especially pleased to find confirmation of my opinions in the remarks of Mr. W. F. Snell (Kent C.C. expert), particularly relative to the advantages of natural open-air methods and the use of soft food.

Small conferences of this description can scarcely fail to benefit the industry as a whole by focussing experience and rendering it generally available, and the interchange of opinions about matters still in the experimental stage should tend to the furthering of development upon practical lines.

THE SCOURGE OF CHICKENHOOD.

ALTHOUGH in Europe we have not suffered losses nearly to the same extent by what is known as "Bacillary White Diarrhoea of Young Chicks" as in America, the mortality is great enough to compel attention, for, with greater and more intensive production the probability is that we shall find it becoming more prevalent, unless precautionary steps are taken well in advance. A considerable number of investigations have been made and much literature published, some of which has been very superficial indeed. One of the most valuable records yet issued is from Storrs Station, and is the result of experiments conducted by Professors Rettger, Ph.D., and F. D. Stoneman, in which an attempt has been made to trace the cause as well as note the effects. The points which are brought out in this report are that many chicks are hatched with the organism from which this disease arises, due to the fact that these were in the ovaries of the mother hen, that the presence of bacteria has been traced even in fresh eggs, and that infection may be made by means of food and water. These are all of considerable importance, emphasising the necessity for providing conditions which do not favour bacterial growth, and of using none but healthy breeding stock, so far as that is known. One fact must be realised—namely, that intensification of method, more especially the keeping of birds within enclosed yards, by which they are brought into a state of body favourable to bacterial development, and where the soil becomes equally conducive to increase of these minute creatures, alters the whole aspect of affairs.

The experiments recorded in this Bulletin can only be summarised very briefly. These were:

(a) Infection through the food supply. Six lots of chicks were selected, reared under identical conditions and fed in the same manner. Three had food infected with *Bacterium pullorum*, the bacillus of white diarrhoea, and three not. The deaths of the former were 71, of the latter 4, each out of 100.

(b) Mother hen as source of infection. In this case hens from infected and non-infected flocks were killed and examined. The presence of the bacillus was proved in the yolks of eggs laid by the former, and not in the latter; also chicks from eggs hatched gave the same results.

These are important conclusions, and are of great value. We quote the Summary and Practical Suggestions, and call special attention in the last-named to the use of sour milk as a preventive.

SUMMARY.

"In order to avoid possible confusion we have applied the term 'bacillary white diarrhoea' to that form of disease of young chicks which is caused by *Bacterium pullorum*. This is the disease commonly called 'white diarrhoea' by the poultrymen of New England.

"1. The original source of infection is the ovary of the mother hen.

"2. Eggs from infected hens contain the organism in the yolks.

"3. Chicks produced from infected eggs have the disease when hatched.

"4. The disease may be spread through the medium

of infected food and water. Hence normal chicks may acquire it by picking up infected droppings or food contaminated thereby.

" 5. Infection from chick to chick cannot, apparently, take place after they are three or four days of age.

" 6. As a rule, infected chicks make less satisfactory growth than those that are apparently normal. For some time they appear stunted and weak, but may eventually undergo more or less complete development.

" 7. The female chicks which survive often harbour the infection and may become bacillus carriers. Infection in the breeding-pens is perpetuated in this manner.

" 8. In all probability infection does not pass from adult to adult.

" 9. Infected hens are apparently poor layers, especially in their second and subsequent laying seasons.

PRACTICAL SUGGESTIONS.

" It is of the greatest importance that the poultryman learn to recognise bacillary white diarrhoea, both

flock should be discarded for breeding purposes, and eggs for hatching secured from a non-infected farm. We have records of farms where the disease has been eliminated in a single season by following this plan, and without any change in equipment or methods.

" Another possible means of determining infection of breeding hens is the direct examination of the ovaries. It is entirely practicable to inspect these organs through an opening in the side of the bird similar to that made in caponising. Where the abnormal condition is marked it may be easily detected.

" Great care should be exercised that breeding stock, young chicks, or eggs for hatching, be secured from flocks which are free from white diarrhoea infection.

" As to the means of preventing the spread of infection from chick to chick, segregation of chicks during the first four days after hatching should prove effective. It is entirely probable that keeping chicks in small groups in the incubator for forty-eight hours after hatching will materially reduce the chances of a few infected individuals spreading the infection through the entire hatch. For division into small groups we suggest the use of pedigree trays, wire

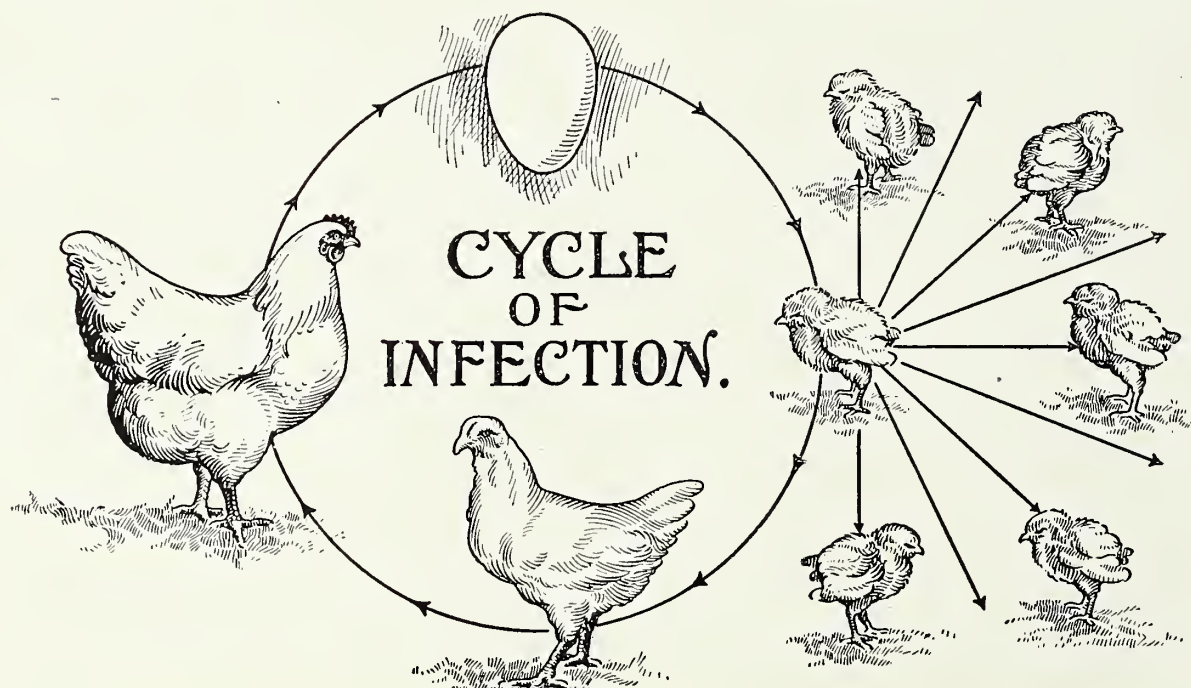


Diagram showing how bacillary white diarrhoea perpetuates itself in the breeding stock.

through external symptoms and post mortem appearances of diseased chicks. The mere discharge of whitish material from the vent is not in itself proof that the chicks are affected with this specific disorder.

" Infected hens should be eliminated from the breeding-pens. Such elimination is made possible by pedigree records of chicks. If the eggs from the different pens are hatched separately, and the chicks segregated for the first few days, it will soon be made apparent through the condition of the chicks which pens contain infected hens. This may prove effectual in cases where infection has not become general. To determine which individual hens are infected, the trap-nest should be used, and the same general procedure followed.

" In case infection exists and it is not practicable to determine the breeds which are infected, the entire

baskets or bags made of mosquito netting. Naturally, the smaller the group the less the chance of spreading the infection.

" From the time the chicks begin to hatch until they are removed to the brooder, the incubator should be kept dark. This will largely prevent the chicks from picking at the droppings.

" Since infected chicks make unsatisfactory development for the first few weeks, and may later regain vigour and make fair growth, it is advisable to select at any early age those intended for breeding purposes. The selection may be made when the chickens are from eight to ten weeks of age, reserving only those which show greatest vigour and development.

" Incubators, brooders, and all other appliances used in the hatching and rearing of the chicks should be cleaned and disinfected frequently.

"Food and water should be supplied in such a manner as to prevent contamination with infected droppings. The use of fine absorptive litter in the brooder, especially for the first few days, is also advisable.

"The feeding of sour milk may prove very effective as a preventive measure. The milk must be fed early, or during the infection stage. After the white diarrhoea organism has once entered the general circulation, such treatment is of little or no value. Hence, sour milk should not be looked upon as a cure, but merely as a possible preventive agent.

"Since perfect physical condition is, as a rule, a barrier to disease, it is important that the health and vigour of the breeding stock and chicks be raised and constantly preserved. Proper methods of housing, feeding, incubation, brooding, and management should therefore be employed."

Messrs. Rettger and Stoneman may be congratulated upon a most valuable contribution to the study of this fell disease.

Chinese Eggs.

The Flowery Land commenced sending poultry to Britain two years ago. Now eggs are being shipped from China to the Western States of America, it is said, in considerable quantities.

Fattening a Million Chickens.

It is stated that the Carrollton Produce Company, of Carrollton, in the State of Missouri, fattens a million chickens a year. The figures are very round, but evidently a big trade is done.

THE CHRISTMAS CHICKENS.

THE Christmas demand for large fattened fowls is of a special character, and although the total December consignments of those who are engaged in the fattening industry are generally small in comparison with their output during the preceding five months, yet their daily totals immediately before Christmas equal the largest consignments of the London season and double those of other periods. The finest specimens of this production are not infrequently described by the retailers as "capons," although caponising is practically unknown among our commercial producers; these so-called capons being well-grown and well-fattened birds of some five or six months old, classed as chickens, but a little older than the average of the normal production. Well-selected birds of a suitable breed may be fattened to an approximation to 6lb apiece at five months of age, which is not, of course, excessive as far as mere weight is concerned; but where quality and appearance are considerations it is a very safe limit. A weight of about 10lb usually implies an age of over six months, and is generally accompanied by undesirable coarseness and grossness. Such weights as 7lb and 8lb are often attainable without material loss of quality, but seldom in any number. Nevertheless, although quality must be considered in relation to size, for the satisfaction of a section of the demand, there is yet a division in which size and weight appear to be of greater importance than fineness of quality;



ON A HAMPSHIRE FATTENING ESTABLISHMENT. CHICKENS BEING CRAMMED FOR CHRISTMAS.

[Copyright.]

The Photograph was taken about December 19 last year.

and the average Christmas buyer sets a special value on large fowls.

In preparation for the satisfying of this demand, the earlier selections for ordinary routine fattening must leave in reserve the most forward birds of those that have already attained a promising growth and development; the penning for fattening of the specially selected taking place not later than about the second or third week of November. In order to obtain the extra weight the normal fattening period of from three to four weeks is insufficient, and the highest weights cannot be attained in less than from five to six weeks of special feeding. It is, however, very easy to overdo the fattening process, and no general rules can be formulated that shall apply to all fowls equally; it is very largely a matter of individual health and temperament; and to bring any number successfully through the longer process presupposes considerable skill in the fattener and is quite beyond the powers of any but the experienced. The average producer, as apart from the man who specialises as a fattener, will generally do proportionately better by subjecting his birds to the more ordinary fattening period, using only well-developed chickens of a large-framed variety.

Pen fattening is a very unnatural method, and the uninitiated usually commence by over-feeding, failing to realise that it is only the food actually digested that benefits and not the mere quantity consumed. Over-feeding not only involves the loss of a portion of the food; but the surfeited fowl loses condition instead of gaining weight, as also will the unhealthy ones or those of a restless disposition. A preliminary fast when the bird is first penned is as essential to the making of a good start in the process as the final withholding of food before killing is necessary to the appearance and condition of the dressed bird. A secluded situation is necessary to contentment, disturbance and any extent of visual range, including fowls at liberty, inducing a restlessness and irritability incompatible with the desired increase of bulk. The food, consisting of Sussex ground oats, mutton fat, and milk, should be rather thinly mixed at first, but gradually thickened, although it should always be pourable; and the birds should be trough fed twice daily.

During the ten days or more of trough feeding the amount of food supplied must be carefully regulated and gradually increased, but on no account should the quantity be excessive at the commencement; the birds cannot stand heavy feeding at the beginning of close confinement, and require, as it were, to be educated up to it. The food should not be too long left before them at any period of the process, the trough being removed when the birds are sufficiently satisfied—according to the judgment of experience. In the production of the less highly finished class of fattened fowls, trough feeding comprises the whole process, and a considerable improvement in condition may be achieved in a fortnight, or as much longer as the birds will bear the treatment; but, if too long continued, they will retrograde more rapidly than they advanced.

Machine cramming, whether for a long or short period (which depends upon the fowl and the man), can only be successfully accomplished after a practical training under an experienced fattener.

THE FANCY & WHAT IT HAS DONE.

By A WELL-KNOWN FANCIER.

IT is an irrefutable fact, that the poultry industry of the British Isles is an important and increasing one. And it is equally true that the poultry Fancy, from a commercial point of view, is a much better asset than is dreamt of by the majority of poultry-keepers. One cannot ignore the fact that this country does not supply its own requirements in the poultry line, and many millions of pounds are annually paid for the importation from foreign parts of poultry and eggs for edible and other purposes. But, as many of those imported commodities are classed as low-grade and are used in trades and manufactures, the question naturally arises, Would it be profitable to produce them here?

More than one well-known poultry authority has proved conclusively that it would be impossible for poultry-keepers in this country to produce eggs and poultry profitably to compete successfully with the low-grade stuff. It is for this reason, therefore, that fanciers have considered it best to leave the supplying of such things to the foreigner and to aim at something higher—something which will give them a more satisfactory return for their outlay. And the result is that to-day thousands of people are turning their attention to the poultry Fancy.

Poultry-farming pure and simple has rarely been found successful in this country; and unless there are some very drastic and unforeseen changes, it probably never will pay the rent and taxes, labour, depreciation, food, and other bills, and leave a fair income independently of other stock. The industry of utility poultry-farming might support its workers; but it will never yield sufficient surplus to satisfy expectations nor to guarantee a large outlay of capital. Commercially considered, poultry-keepers do not lose by the great importations; on the other hand, they gain, since their energies may be directed to the culture of fancy poultry.

There can be little doubt that the Fancy aims for the good of the whole poultry industry. By maintaining pure breeds of poultry, and chiefly through the medium of exhibitions, the properties of table birds have been vastly improved; and the almost limitless number of fanciers throughout the country, as a matter of course, has enormously checked the influx of foreign eggs. Whatever may be one's private or individual opinion of the merits of fancy or utility poultry, exhibitions of our domesticated breeds during the last quarter of a century have increased tenfold. And such is the demand for poultry shows that in 1910 no fewer than about seven hundred and fifty were held in the British Isles. Then, again, during the past twenty-five years more than thirty distinct varieties and sub-varieties have been placed before the public; and there is no reason to suppose that the limit in that direction is yet reached.

It must not be forgotten that the original intention of awarding prizes at shows was, as, indeed, it is now, to encourage the breeding of high-class specimens and to induce people to take up such an engrossing hobby. For, let it be remembered, the Fancy is, first and foremost, a hobby. The keeping,

breeding, exhibiting, selling, and buying of fancy fowls form a most interesting and pleasant change from the worries of the business man, and also provide a source of pleasure for those who, after a busy life, require some innocent excitement to drive away ennui. Fanciers are drawn from every sphere of life; and probably no hobby provides so great an opportunity for the combination of pleasure and profit as the keeping of a few fowls.

The spoliation of breeds is a term which has frequently been used in connection with fanciers and their methods. In certain sections of the community there is a prevalent idea that by breeding poultry to a standard of perfection such as is adopted by the Fancy it must necessarily impair the useful properties of a breed. This is, however, in a great majority of cases, a mistake. In a few instances, when the type and plumage aimed at are hardly favourable to utility, the bird may become less useful; but, generally speaking, the fancier's objects are towards the development of useful properties. Certainly, the fancier's chief aim is beauty, and not "utility," as most of us to-day understand the latter word; but both objects usually run together.

Twenty-five to thirty years ago such breeds as Bralimas, Cochins, Dorkings, Game, Hamburgs, Polish, and Spanish were considered the best kinds to keep, some of them for laying qualities and others for the production of table fowls; but few of those breeds are now kept to any extent in this country. And why? Is it fair to saddle the fancier with their decline in popularity? If it is true that they were exceptionally good utility breeds it would surely not have been a difficult matter for the utilitarian to have kept them in the front rank all along. But when compared with the breeds that have been brought out since the 'seventies they have been found wanting, and in course of time have had to give place to their betters. And to-day there is a much wider range of truly useful and profitable varieties of poultry, thanks to the fancier, than existed when the Spanish breed was so popular as a layer.

The fancier has been blamed for bringing out new varieties; but despite the fact that they are being bred to "feather," they are all useful from a strictly utilitarian aspect. And what is perhaps of more importance, they induce people to become poultry-keepers, and thus help to swell the ranks of the ever-increasing army of those whose fancy lies in the direction of poultry. Shows that give encouragement to the fancier have been condemned for working hand-in-hand with them; but poultry fancying and showing have been of the utmost value in encouraging a desire for pure-bred stock. Without such a stimulus the great improvement which is seen in the size and quality of many breeds would never have taken place. People would not be sufficiently enthusiastic to look forward to the far-off end of the general improvement of poultry as a marketable commodity had they not meanwhile some present diversion from and interest in the pursuit of breeding.

It has been said that in 1910 there were about seven hundred and fifty exhibitions of poultry. It may be taken at a low estimate that the average entry at each event was one hundred birds. Now, every bird bred in a fancier's yard is not fit to show; but, supposing that one in twenty comes near enough

to the standard to warrant its being exhibited, the reader can readily imagine the great number of birds which have to be bred to keep up the shows. In this case it would be well over a million and a half. Presume that half the birds are pullets and that each averages one hundred and twenty eggs per annum. People do not kill pullets as a rule, whether they be show birds or culls; they are kept for laying, no matter how faulty is their plumage. At the lowest computation, therefore, through exhibition breeding, the country is the richer by over ninety million eggs annually. Let it be emphasised that the foregoing estimates are low. But even then it will be seen how fancy poultry-keeping tends to check the influx of foreign eggs. Then, what becomes of all the cockerels which are neither good enough for exhibition nor suitable for stock purposes? They are sold off for market at killing prices.

That is not all, however. The fancy side of poultry culture does good in other ways. Considered purely as a hobby, it provides a healthy and innocent amusement to hundreds who need such to relieve the monotony of life or of labour, because fanciers are drawn from all classes, from the peer of the realm down to the artisan or dock labourer. Then, again, from a commercial standpoint, hundreds of appliances are called for annually, and so there has grown up, through the keeping and breeding of exhibition poultry, a big industry in the appliance line, employing thousands of workpeople in their manufacture. The timber trade is better thereby; the corn trade is improved; railway companies command a good revenue from the fares of visitors and from the carriage of birds to and from the exhibitions; halls and local houses make a profit at show times. The Government gets a haul in the thousands of postal orders that pass annually. In fact, it is difficult to say where the great influence of fancy poultry ceases. And there can be little doubt that the country would be a vast deal worse off without fanciers, both in the matter of eggs and table fowls, and in that of finding work for thousands now profitably employed in something or other connected with the fancy side of poultry culture.

Poultry Packing.

One of the largest New York firms has adopted the plan of packing poultry in individual cardboard boxes. Large birds are packed singly, smaller ones two in each box.

A Big Poultry Plant.

Messrs. W. R. Curtis and Co., of Ransomville, N.Y., claim to have the largest poultry establishment in the world. They are advertising for sale specimens of various breeds, numbering in all 10,000 pullets and 500 yearlings. They carry on a huge market business as well, inclusive of ducks.

Bad Methods of Marketing.

The U.S. Bureau of Animal Industry in a bulletin entitled "The Improvement of the Farm Egg," states that American farmers lose annually \$45,000,000 (£9,000,000) by bad methods of handling eggs for sale. That is equal to 17 per cent. of the total crop.

FANCIERS AND FANCY MATTERS.

By WILLIAM W. BROOMHEAD.

The Dairy Show—Successful Exhibitors—The Management—Ringling Show Birds—The Late Mr. P. Proud—November Shows.

THE DAIRY SHOW.

It was a great show! Such, at any rate, appeared to be the general opinion of poultry fanciers who put in an appearance at this year's "Dairy"—the 36th annual exhibition of the British Dairy Farmers' Association, to give the event its official title—held on the 3rd, 4th, 5th, and 6th of last month. The entries were up, not by hundreds certainly, still they were nicely in advance of last year's total, and as regards the poultry section, it was the best display that has been at Islington for the past five or six seasons. There were some 3,100 all told in the classes for live birds, only two "a" numbers, less than ten cancelled classes, and decidedly keen competition in most breeds. I have been carefully through the catalogue, and can trace only two late entries—viz., 237a in the Any Other Variety class for breeding-pens, and 945a in that for rose-combed Black Leghorn pullets, while the cancelled classes were as follows: Three for Cochins, two for Modern Game, one each for Brahmas and Old English Game, and two for Ducks. One wonders, perhaps, at classes being cancelled at such an important event as the "Dairy," but provision is made for it in the rules, since No. 2 of the Rules and Regulations for the Poultry and Pigeon Department reads: "Should there be less than eight entries in any class the committee may, if they think fit, return the fees and cancel the class," and it is repeated in quite bold type at the head of the rules. Of course, it must have been a case of no entry, since, for instance, five of the six classes for Hamburgs had less than eight entries; in the only class scheduled for Black Sumatra Game there were seven; half of the Leghorn classes were under eight; and there were others in the live poultry section, as well as in that for dead birds which were not up to full strength.

SUCCESSFUL EXHIBITORS.

Perhaps the most successful exhibitor at this event was Mr. O. F. Bates, since in addition to winning several class prizes with Laced Wyandottes, White Orpingtons, and Game and Variety Bantams, he won two of the three champion cups, as well as the Association's gold medal for the best exhibit in the 230 classes for live poultry. Other fanciers, however, scored well in "their own little way." Mr. J. Y. Wheatley, for instance, in Waterfowls won the silver medal for the best duck or drake, as well as that for the best goose or gander; and, of course, he took the champion cup for the best pen of Waterfowl. Then there was Mr. Edward A. Cass's great scoop in the Buff Orpington pullet class. But the ILLUSTRATED POULTRY RECORD contains some notes on the winners in this issue, so I need say no more on them here.

THE MANAGEMENT.

The management of the section was in good hands, and everyone concerned worked with the object of making it an ideal show, as indeed it was. The extra

large entry of Orpingtons made it somewhat difficult to arrange all the classes for the breed adjoining each other, and some of us who are interested in the Jubilee and Spangled varieties had a hunt for these classes at first. Nevertheless, everything was done for the best. Fanciers turned up in hundreds from all parts of the country, and I never recollect there being a stronger "gathering of the clans" at the "Dairy." Among the visitors, too, were two or



A CHAMPION BUFF ORPINGTON COCK BELONGING TO MR. W. RICHARDSON. [Copyright.]

three from "across the Herring Pond," and not a few from the Continent. I had the pleasure of going through the Rhode Island Red classes with a prominent Canadian breeder; and, apparently, our birds fall far short of those in America! However, I did hear that some may come over to the Palace this month, so I hope to have a good look at them, and make comparisons. Meetings of specialist clubs were hardly as numerous as formerly, at least so it appeared to me; but there were quite enough of them, and it would be a good move to have them entirely abolished, confining them rather to the International, at which event so many club shows are held each year.

RINGING SHOW BIRDS.

An incident that occurred at the Dairy concerning the ringing of show birds is worthy of a special note here. In the class for Black Orpington cockerels, pen 1,380 was marked "passed for wearing a ring." This bird—quite a good one, too—was exhibited by

Mrs. W. Waldron (of Rose Adèle, Canichers, Guernsey), and it was wearing the Guernsey Poultry Club ring, which has long since been sanctioned by our Poultry Club, and which is very similar to the ring at one time adopted by the Poultry Club. Although it is not definitely stated in the rules of the B.D.F.A., I think it is pretty generally understood that the Dairy Show is held under Poultry Club Rules, and I believe it is a fact that exhibitors on the Poultry Club black list are debarred from entering at the event. It seems very hard, therefore, that a bird wearing a sanctioned ring should be thereby put out of competition. However, it is another case of not reading the rules! It is distinctly stated in No. 3 of those aforementioned that "Birds bearing the rings issued by the Pigeon Marking Conference and the Poultry Marking Committee are . . . eligible for competition. No other rings will be permitted or anything to indicate ownership, except in the case of Working Homers." Perhaps, after all, however, it is putting too fine a point on it, since the Guernsey Poultry Club ring does not indicate ownership, any more than does toe punching by means of a plain round hole, which is also permitted by our Poultry Club. And more than one winner in the poultry classes at the Dairy were so marked. Moreover, since the Poultry Club is, I believe, allowing other

Proud, which sad event took place on the 12th ult. Mr. Proud had been ailing for some time, but those of us who knew him, and how he had pulled through two or three serious illnesses, little thought that this would be his last. He was a rare good judge of poultry and pigeons, and no one could get through a big task quicker and with better results than could our late friend. Death has been busy in Fancy ranks these past few years, but none will be more missed from among us than he. For some years he had been chief of the outside staff of our contemporary, the *Feathered World*, while prior to that he was editor of the now defunct *Fanciers' Gazette*. He finished his exhibition career shortly after he took up his post on the former journal, but as a judge his services were in demand in all parts of the country, and he must have judged more shows than any of us who now act in that capacity.

NOVEMBER SHOWS.

The winter campaign has opened well, and already some seventy shows are announced for the present month. The great Specialist Show at Kendal, for Game Fowls and Game and Variety Bantams, and comprising eighty-five classes, opened to-day and closes to-morrow. There is also a show at Maidenhead (Berks) to-day, and to-morrow there will be exhibitions at Tredegar (Mon.) and St. Austell (Cornwall), while on the 2nd and 3rd shows are announced to be held at Great Yarmouth, Norfolk, and Chatham (Kent). On the 4th there will be four in Scotland, including Stewarton (Ayrshire), while on the same day there will be events at New Mills (Stockport), Braintree (Essex), and Cleator Moor (Cumberland). Chelmsford (Essex) comes off on the 7th and 8th, and Pontypridd (Glam.), Bodmin (Cornwall), Swindon (Wilts), and Buchie (Banff) on the 8th. Neath (Glam.), Bonsall (Derby), and Appleby (Westmorland) are booked for the 9th, and the Scottish Game and Game Bantam Club Show at Cardenden (Fife) on the 11th. "The Greatest Show on Earth"—the Grand International, at the Crystal Palace, with its 550 classes for poultry, and a "meet" of thirty specialist club events—will take place on the 14th, 15th, and 16th, while clashing with it are Bristol, 14th and 15th, and Goole, Yorkshire, on the 16th, and on the following day the Fat Stock Show at Horsham—one of the best one-day winter shows in the south. On the 21st and 22nd Viscount Tredegar will hold his annual poultry exhibition at Newport, Mon., for which a schedule of sixty-three classes, with cash prizes of 40s. first, 20s. second, and 10s. third has been issued. The White and the Partridge Wyandotte Clubs are fixed for Cirencester (Glos.) on the 22nd and 23rd, Milnthorpe (Westmorland) comes off on the 23rd, Wellington (Somerset) on the 24th, and Woolwich on the 24th and 25th. "Grandmother" Birmingham—with quite an up-to-date classification this time—opens on the 25th and closes on the 30th, while between those dates are Launceston (Cornwall), 28th, Cambridge, Ulverston (Lancs), and Epsom (Surrey), 29th, Redhill (Surrey), 29th and 30th, and last, but by no means least, Theydon Bois (Essex), 30th. This show, which is always a good one, should be a record event, since the prize-money has been increased to 20s. first, 10s. second, and 5s. third.



ONE OF MR. W. RICHARDSON'S WINNING BUFF ORPINGTON PULLETS. [Copyright.]

rings, such as the Belgian, French, and German, would it not be as well for the Dairy Show executive to amend No. 3 of its Rules and Regulations for the Poultry Department?

THE LATE MR. P. PROUD.

News is just to hand of the death of one of our best-known fanciers and poultry judges, Mr. P.

THE PREPARATION OF GEESE AND TURKEYS FOR CHRISTMAS.

By FRED. W. PARTON.

THE rearing of geese and turkeys offers great inducements to farmers, both large and small, but seldom, indeed, is the maximum of profit obtained by reason of inattention to, or ignorance of, the main points incidental to success. On many farms the initial mistake dates from the time when the birds are quite young, for the ultimate success depends largely upon the early feeding and management. This applies to both geese and turkeys, but especially to the latter,

to speak of next year's management. We would, therefore, rather deal with the preparation of these birds in readiness for the coming season.

The demand for both geese and turkeys is an enormous one, and although each year the supply increases, yet no diminution in demand is apparent, and prices have an upward rather than a downward tendency. It is estimated by no less an authority than Mr. Edward Brown that about a million and a half turkeys are consumed in this country at the Christmas season, half of which come from foreign countries. This should be a great incentive to further effort by the present producers, and a temptation to others to compete in this lucrative trade, provided, of course, that plenty of land is at the disposal of the would-be



THE FAVOURITE TURKEY FOR CHRISTMAS—THE AMERICAN BRONZE.

[Copyright.]

since geese do not require the same amount of care and attention during the brooding stage. If they are the progeny of parents which are well grown and fully matured, and of a good strain, the young goslings are well able to take care of themselves. When once they are hatched they will thrive apace, and, despite conditions which would be detrimental to other kinds of poultry, will develop a large frame. With turkeys just the reverse is the case, since the very greatest care must be lavished upon the young ones if they are to realise the prices that can only be obtained for large specimens at Christmas time. It is, however, for the present year too late to offer any advice as to the treatment of geese and turkeys at the beginning of their careers, and it is too early

breeder, since it is essential that turkeys should not be kept too thickly upon the ground.

At the present time turkeys should be large and still growing, and no check should be given to this development, but rather should they be allowed to have all the liberty they have enjoyed, or should have enjoyed, up to the present time. This freedom may continue up to, say, the middle of November. Turkeys are splendid foragers, and when they have been kept in suitable places, they will have had an abundance of natural food, as well as vegetables and other green stuff, and should have got themselves into excellent condition for fattening. Now a different method of treatment must be adopted, as it is time to prepare for the ripening off. Not only must flesh be

added to the frame, but the flesh must be of good quality, that is, white and tender.

When the time arrives for the fattening process, it is imperative that the birds should be penned, not, of course, in the same close confinement as a Surrey or Sussex fowl when it is being fattened, but rather in a big, roomy shed, in which there is plenty of fresh air and light. A disused stable or barn answers well; in fact, any available building that can be given up to them for the four or five weeks does very well. The doors of such a building should be left open, the doorway being fitted with a wooden frame covered with wire-netting. It is imperative that there should be a plentiful supply of fresh air; at the same time a draught must be avoided, for turkeys are very susceptible to cold, which is more easily caused by a draught than by any other neglect.

If the improvement is to be complete, the birds must be kept in a happy, contented state. By those who do not realise the importance of these matters they may be regarded as trifling and quite superfluous to the main issue. This is not so, however, since the conditions under which the birds are kept is almost of as much importance as the actual feeding. However abundant be the food, and however suitable it may be for the purpose, the process is greatly hampered if the conditions are not conducive to health and contentment.

The food from the time they are confined in the shed should consist, for their morning feed, principally of mash, made of ground oats, barley-meal, or wheat-meal mixed with skim milk, with the addition of small quantities of any vegetables that are available, chopped very finely, and well mixed with the mash. During the last ten days about half an ounce of fat per bird per day will considerably improve the quality of flesh. Late in the afternoon a feed of oats, or small white Indian corn, which should be steeped in hot water, aids digestion, which is necessary when the birds are kept in confinement.

Many of the same remarks apply to the fattening of geese for the Christmas markets. They should be penned in the same sort of shed for the same length of time. The food also, with one or two little differences, may be of the same nature. It is better to give *less* mash and *more* corn than in the case of turkeys. The fat, so necessary for the final finish in the flesh of turkeys, is not required for geese, since the flesh is much more luscious and richer than the flesh of the former. Corn, well soaked, to a large extent counteracts this, and gives a firmness to the meat which is entirely lacking in the abnormally fattened specimens. When vegetables are cooked and, together with the water in which they are boiled, are used for making the mash, it has a cooling influence upon the body and is helpful in maintaining them in good health and condition.

Both geese and turkeys should be starved a day before being killed, and the killing be done in an expeditious manner, either by dislocation of the neck or bleeding by cutting the jugular vein. The greatest care should be taken in the plucking so that the birds may be placed upon the market in the most presentable fashion. This goes far to secure the high prices which are to be had for well-fattened specimens during the Christmas season.

NOVEMBER NOTES FOR AMATEURS.

By AN AMATEUR.

WE have now arrived at that critical period when severe weather may be expected at any time, and it is the business of the poultry-keeper to be prepared for it. We must not only make sure that the house is wind and weather proof, and that nothing serious is likely to happen should a gale or a snow-storm come along, but we must also see that the birds themselves are in condition to withstand a sudden change. What is their condition at the present time? If they are already in full lay their state of health must necessarily be satisfactory, and with proper accommodation available they are not likely to take much harm from a spell of bad weather.

The advantages of shelter must not be overlooked. With some roomy outhouses or sheds one can keep these birds in health and comfort when the weather is too bad for them out of doors. Late moulting hens especially need such protection, and a great advantage with all stock is to keep them active. If they have to be shut up in buildings, see that they do not mope about all day. Spread some litter on the floor and scatter a little corn by way of encouragement.

With regard to snow and its effect upon layers, though it is to be devoutly hoped that we shall have no downfall before Christmas, it is always advisable to be prepared, and amateurs should know what is the best thing to be done if they wake up one morning to find the earth covered with a white mantle. If there is a covered run attached to the house, all well and good. The birds can be kept confined there. But when there is no covered run and the roosting-house is small, a serious difficulty arises. However, the best plan, whilst the snow continues to fall, is to remove the perches and any droppings on the floor, scatter some litter, and throw down hard corn among it. The door may be left open and the sliding shutters dropped, to admit light.

As soon as the snow ceases to fall, however, brush and shovel should be set to work, and a good-sized space cleared in front of the house, on which plenty of hay, straw, leaves, or other litter may be spread. Then scatter some corn about, and the birds will work away quite happily, and keep warm. Do not throw down all the grain at once, or they will become satisfied and cease working. Two or three handfuls occasionally will keep them going for some hours, and if they get tired of scratching, drive them into the house again.

Those who have cockerels and other stock to dispose of for table purposes often wonder whether it will pay them better to clear them off at once or keep them for Christmas. If they are already plump and ready for killing, and especially if space is limited, it will be better to market them at once. If, however, the birds are poor, it will obviously not pay to sell them at present, and they should be specially fattened up for Christmas. This means more expense, of course, but large, well-fed fowls realise good prices during the festive season, and one can afford to feed them well for a month or six weeks previously.

INHERITANCE IN "BLOOD LINES" IN BREEDING.

By DR. RAYMOND PEARL.

[The facts and figures given in our October issue with respect to the Maine Station's work in attempting to increase egg-production was destructive of views generally, almost universally, held. The following paper, reprinted from the annual report of the American Breeders' Association, indicates that Dr. Raymond Pearl is at work constructively.—EDITOR.]

IT has been generally assumed in breeding for performance in all animals, whether for egg-production in poultry, or milk-production in cattle, or speed in horses, &c., that the best, and, indeed, practically the only criterion of an animal's worth or value as a breeder is its actual performance record. That is, it has been assumed that the animals which make the best performance records are, by virtue of that fact alone, the best individuals to breed from in any consistent and systematic attempt to improve the strain with reference to the character in regard to which the record was made. Performing ability is taken as the criterion of breeding worth. Thus, to take some illustrations, it was assumed at the beginning of experiments in increasing egg-production by breeding at the Maine Station that "200-egg hens" are the best hens to breed from in attempting to build up a high-laying strain. The fact that such birds had laid 200 or more eggs in a year was taken to be an indication that their offspring would be likely to lay more than the average number of eggs produced by the general flock. Again, in the case of dairy cattle, the assumption which lies at the basis of the advanced registries which exist for the principal dairy breeds, so far as such registries relate at all to the use of female animals as breeders, is that the heavy milker is, because of its performance, a more desirable female to breed from in attempting to bring about superior average performance in the herd than is the female of lower production.

The results of certain experimental studies in breeding for performance would appear to indicate that this common assumption that a performance record is the best criterion of the breeding value of the individual is not well founded in fact. On the contrary, it appears to be the case that the performance record is in itself rather a poor indication of the breeding value of the individual. It is certainly no better as a criterion than a number of other characteristics of the individual which are much more easily ascertained. That this is the case is perhaps nowhere more clearly shown than in the results of a recent experiment in which the egg-production of the daughters of high-producing hens was determined exactly and on a rather large scale. The results of this experiment have already been published in detail and need not be repeated here. Summarily stated they were as follows:

There were put into the laying-house at the beginning of the laying year 250 pullets, each one of which was the daughter of a hen that had laid in one

year approximately 200 eggs. At the same time there were put into the house 600 pullets of the same average age and degree of development as these daughters of "200-egg" hens. Both sets of birds were kept under as nearly as possible the same conditions and were fed and handled in the same way. Careful account of the egg records showed that there was substantially no difference in the egg-production of the two groups of birds. So far as there was any difference at all it was in favour of the birds which were not the daughters of "200-egg" hens. They averaged to lay a few more eggs per bird than did the daughters of the very high layers. Subsequent studies have repeatedly confirmed this result that daughters of high-laying hens in general are not themselves, on the average, high producers.

The essential points which come out of this and similar experiments, and which bear upon the general principles of breeding for performance, seem to me to be, first, that a performance record in and of itself is not a good criterion of the worth of the individual making the record in breeding for performance. This would appear to be obvious. If the performance record were a good criterion we should expect the daughters of the high performers to lay more eggs than the daughters of lower performers. In the second place, the individual records obtained in this experiment show that, contrary to what is assumed in the theory of breeding which makes performance the criterion of breeding value, "200-egg" hens do not form a homogeneous group but, on the contrary, a very heterogeneous one. Such birds are only alike in respect to the single fact that each of them laid 200 or more eggs in a year. What is of most importance is that they are not at all alike in regard to their ability to transmit egg-laying qualities.

These results indicate that from the practical standpoint the proper criterion of breeding worth in breeding for performance is not the performance record itself, but rather the ability of the individual to transmit performing qualities to its progeny. That is to say, the best individual to breed from in breeding for performance is the individual whose progeny will be good performers. Is it of any particular significance, so far as her breeding value is concerned, whether a particular hen lays 100 or 200 eggs in the year, provided her daughters uniformly and without exception lay 160 or more eggs in the year, for example? Certainly the thing which makes an animal valuable as a breeder is its ability to transmit regularly and uniformly to its offspring the qualities for which one is breeding.

Now in the literature of animal breeding and inheritance such transmitting ability as is here spoken of is usually called prepotency. The great sire, whether of race-horses or dairy cows, is great just because his get are practically uniformly of good quality. He is said to be prepotent. But to call this peculiar hereditary behaviour "prepotency" in no way helps to an understanding of it. While there is undoubtedly no factor which is of greater importance in practical animal breeding than is prepotency, it is a regrettable fact that there is no problem which has been more neglected by students of inheritance or about which we have any less real knowledge than this same problem of prepotency.

In consideration of the facts just stated I venture

to present a suggestion regarding prepotency and related matters in breeding for performance, which I have been led to adopt as a working hypothesis by the results of some investigations regarding inheritance upon which I have been for some time engaged. The fundamental basis of this hypothesis is that inheritance of performing qualities in animals is in accordance with a plan essentially and fundamentally like the method of inheritance in "pure line" in self-fertilised plants, for the elucidation of which students of heredity are indebted to the brilliant investigations of the Danish botanist and plant breeder,

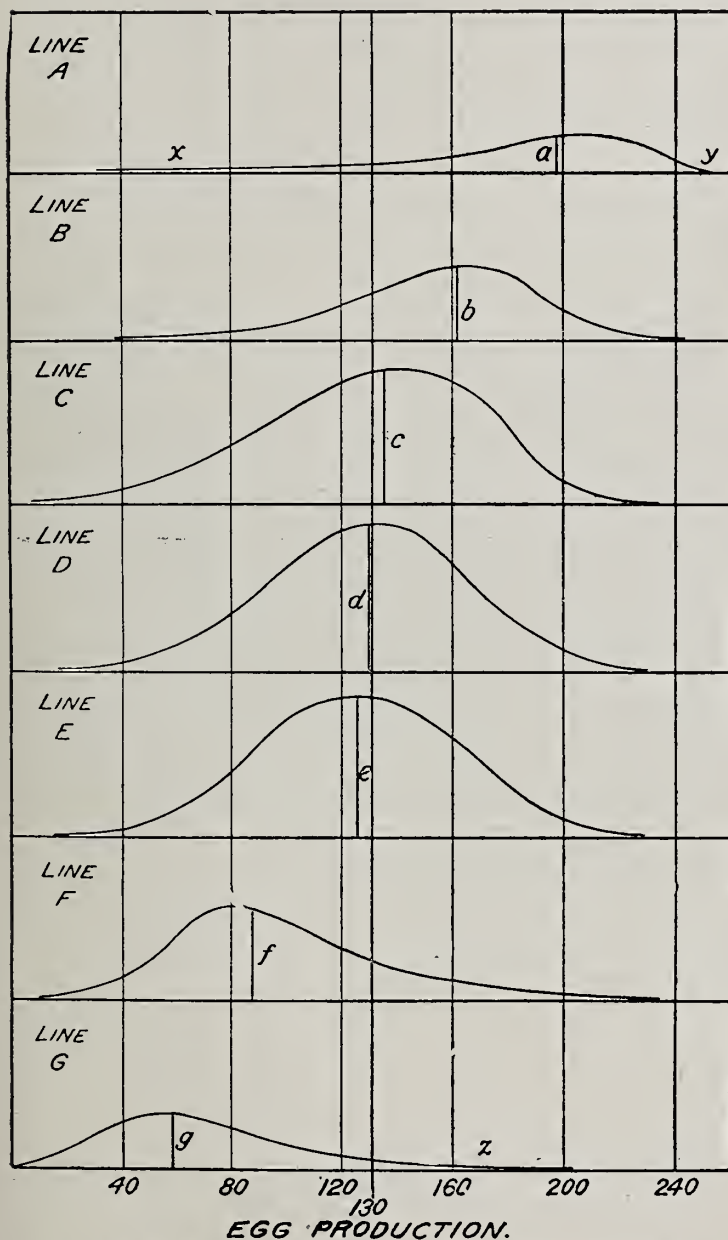


Diagram to Illustrate Hypothesis Regarding Inheritance of Egg Production.

W. Johannsen. In particular the writer is of the opinion that egg-production is inherited in "blood lines." The detailed evidence for this opinion cannot be presented here, because of lack of space. It will be presented in later publications in another place. Here the attempt will be made merely to outline some of the theoretical consequences of this type of inheritance within the field under discussion

We may conceive a flock of hens to be made up of a number of blood lines with respect to egg-production. Each blood line has its own genotype of productiveness (to use Johannsen's very convenient term). The closest approximation possible to get to the value of the genotype in this case (or, in other words, the genotypic egg-production) would be the average productiveness of the *progeny* of any or all individuals of the line, whatever their own performance records, when they are inbred. The facts indicate that the *range* of variation in egg-productiveness shown by the individuals in any single blood line is often practically as great as that of the general flock as a whole. This is an expression of the fact that egg-production is very markedly influenced by environmental circumstances, methods of management, &c.

The existence of the pure line type of inheritance is, of course, greatly obscured in animals by sexual reproduction. It makes the unravelling of the true facts very much more difficult than would otherwise be the case. The only way in which it can be done is by the most careful and thorough study of *individual* pedigrees. Mass methods are chiefly of aid in delimiting and precisely presenting the problems, not in solving them.

This concept of a flock or general population of birds being made up of several genotypes in regard to production may perhaps be made clearer by reference to figure 1.

Let us suppose a population to be made up of the seven blood lines A, B, C, D, E, F, G. The general average production for the population as a whole is 130. The genotypes of the several lines are, however, quite different. We may consider these genotypes to be given by the small letters a, b, c, d, e, f, g. It is seen that three of the blood lines have genotypes corresponding closely to the general flock average of 130. Two genotypes are well above the general average of the flock, and two others below. Now the basic idea of the pure-line concept as here applied is that if, for example, two individuals of line A are bred together, the average productivity of the offspring will be approximately a (say 197 eggs) regardless of the egg record of the particular female bird bred. That is, it is to be expected that the average productivity of the progeny of a female of line A with an egg record at x (say 80 eggs) and of a female with a record at y (say 240 eggs) *will be the same* provided both are mated to male birds from the same line as themselves—that is, the A line.

The same idea may be illustrated in another way. It is to be expected that in such a population as that illustrated in the diagram the average egg-production of the daughters of 200-egg hens will be as indicated in the following table:

If a "200-egg" hen comes from—	The probable average production of her daughters will be about—
The A line, and is mated with an A line male	197
The B line, and is mated with a B line male	162
The C line, and is mated with a C line male	134
The D line, and is mated with a D line male	130
The E line, and is mated with an E line male	125
The F line, and is mated with an F line male	88
The G line, and is mated with a G line male	58

Similarly we have, according to the pure-line con-

cept, the following expectation regarding the progeny of poor producers :

If a "75-egg" hen comes from—	The probable average production of her daughters will be about—
The A line, and is mated with an A line male	197
The B line, and is mated with a B line male	162
The C line, and is mated with a C line male	134
The D line, and is mated with a D line male	130
The E line, and is mated with an E line male	125
The F line, and is mated with an F line male	88
The G line, and is mated with a G line male	58

In other words, it would be expected on the hypothesis set forth, and in so far hypothesis and actual fact are in precise accord, that the record of egg production in and of itself alone is not a criterion of particular significance in selecting females for breeding for improved egg production in the flock. It appears to be of vastly more importance to know the genotype of the line to which the individual belongs. This idea is already perfectly familiar to the successful breeders of poultry for fancy points. What is here called a "blood line" they usually call a "strain."

If, as our hypothesis implies, we look upon a group of animals as made up of individuals representing in their hereditary constitution and behaviour a number of blood lines, it would then appear that an essential problem which is presented in any particular attempt to bring about improvement by selective breeding has to do with the behaviour of characters in heredity when two blood lines are crossed. So long as the breeding can be done solely amongst individuals belonging to the same line the results are sure. But in animal breeding there are two difficulties here. In the first place breeding within a blood line means close inbreeding. How long close inbreeding can be continued without detrimental effect is an unsolved problem for all of the higher animals. In the second place, as has already been pointed out, the sharp separation and exact distinction of the blood lines in a population at any given time is a matter of extreme difficulty, especially when we are dealing with performance, whether milk production, egg production, speed or what not. So that in almost all practical animal breeding for performance there is bound to be (even with the utmost care), supposing our hypothesis to be correct, a great deal of cross-breeding between lines.

The question is this: Given a character inherited according to the pure-line scheme in a sexually reproducing organism. Suppose the mean degree of manifestation of the character within blood line *A* to be *a*, and within blood line *G* to be *g*; now if an individual of line *A* be mated with an individual of line *G* what will be the degree of manifestation of the character in the offspring of the F_1 and succeeding generations? Will there be a blending, giving rise to an intermediate condition, and will this intermediate condition breed true? The problem may be very easily made concrete with regard to poultry: Suppose we have one blood line of say Barred Plymouth Rocks which when inbred uniformly gives pullets whose average winter (November 1 to March 1) egg production is say 25 eggs per bird, and another blood line of Barred Plymouth Rock birds

which when similarly inbred gives pullets whose average winter production is 60 eggs per bird. What will be the winter egg production of the progeny in successive generations of a cross between these two blood lines?

A careful study of hundreds of individual pedigrees concerned with egg production has suggested the following view as to the result of crossing different genotypes in breeding for performance as worthy of further experimental test. There appears to be evidence that in breeding with reference to egg production, when an individual belonging to a line with a higher genotype is mated with an individual belonging to a line with a lower genotype, the offspring will, on the average, tend to approximate to the *higher* condition. Or, in other words, the higher genotypic condition with regard to a performance character tends to be dominant in the Mendelian sense over the lower.

If this suggestion is true, it gives at once, I think, a possible clue to the explanation of a part at least of the known facts regarding what is called prepotency in the practical breeding of domestic animals for performance. It is customary in practice to regard an animal as prepotent in breeding for performance when the progeny of that individual *uniformly* tend to resemble it closely in respect to the character bred for, regardless of the other parent in each mating. Let it now only be considered that the great sire, say, of speed or of milk production belongs to a line having a high genotype with regard to those characters; then it is to be expected, on the hypothesis under consideration, that his progeny will tend on the average to be like himself in performance regardless of what he is mated with, because any female to which he is mated will be either of a high genotype like himself or of a lower one. But if *genotypic* high performance is dominant over *genotypic* lower performance, then all the offspring in the first generation must approximate to the high condition exemplified in the sire. But this is the very essence of what is called prepotency in actual breeding practice.

On such a view of the nature of prepotency the following types of breeding behaviour, usually counted as more or less anomalous, are seen to fall at once into a consistent general scheme.

(a) Cases where an individual is not itself a great performer, but whose progeny, regardless of the other parent, show a uniform tendency to be superior performers. An excellent example of such a case was the trotting stallion Chimes (2:30 $\frac{3}{4}$), who was himself not a trotter of the first class, but who sired a long string of very high-grade performers, including such horses as The Abbot (2:03 $\frac{1}{4}$) and The Monk (2:05 $\frac{3}{4}$). At the time of his death Chimes had the record of having sired 121 standard performers. He certainly had the ability to transmit speed qualities. On the view set forth in this paper such cases would correspond, in an extreme instance, to an individual at *x* in figure 1. The relative poor performer belongs to a blood line with a high genotype, and it is the genotypic condition which is significant in breeding.

(b) Cases where a pair of individuals when mated together at one time produce a wonderful performer, and yet all their remaining progeny, no matter how

many times the mating is repeated, are mediocre. The history of the mating which produced the famous trotter Maud S. is a case in point. Only one Maud S. ever came from the mating. Such a case means, on the view set forth here, that two individuals mated together belong to lines having mediocre *genotypic* performing ability.

(c) Cases where a superior performer is totally incapable, unless mated with a prepotent individual (an individual of higher genotype), of producing high performers. Instances of this kind are too plentiful to need citation. The explanation, on the present view, of course, is that such individuals are simply extreme variants in blood lines of low *genotypic* performing ability.

If the hypothesis suggested approximates reasonably to the actual facts respecting the inheritance of performing ability it would be expected that in the second or F_2 generation from any mating of a higher with a lower genotype the phenomenon of segregation would appear. This expectation furnishes an excellent opportunity to test the truth of the hypothesis experimentally.

Summarising, it may be said that the purpose of this paper is to present (necessarily without any detailed evidence) a working hypothesis regarding the method of inheritance of a group of highly variable characters in domestic animals which taken together may be denoted as "performing ability." Performing ability, whether in respect to speed in trotting horses, milk-production in dairy cattle, or egg-production in hens, has this point in common in all cases, that the degree of manifestation or expression of the character in the individual may be very largely influenced by management or training. That there is, however, an inheritance of different degrees of performing ability admits of no doubt. The working hypothesis as to the method of such inheritance here presented is being tested in breeding hens for increased egg-production. This hypothesis is:

(a) That inheritance of performing ability is in blood lines, and is fundamentally in accordance with the pure line idea of Johannsen.

(b) That a *genotypic* high degree of performing ability tends to be dominant over a *genotypic* low degree of performing ability with phenomena of segregation in subsequent generations.

It is pointed out that this hypothesis appears to give a possible clue to a partial explanation at least of prepotency in breeding for performance. That this hypothesis accounts for all the facts regarding prepotency is not claimed or believed by the writer. Experimental breeding tests will show whether it may not, however, help us along some part of the road towards the final analysis and control of that most important and at the same time most baffling factor in practical breeding for performance—namely, prepotency.

Chickens as Gold Prospectors.

On a farm in California nuggets of gold were found in the crops of thirty chickens killed, from which it is believed the soil contains elements more valuable than for grit purposes. As a result, gold is being sought for, and chickens have been slaughtered in large numbers.

POULTRY TIT-BITS.

CHICKEN CREAMS.—Mince together very finely six ounces of cooked chicken and three ounces of cooked ham or bacon, then season according to taste and moisten well with thick white sauce and the yolks of two or three perfectly fresh eggs. Mix thoroughly. When ready press the mixture lightly, yet firmly, into small dariole moulds which have been well buttered and sprinkled with finely-minced parsley; smooth the tops over with a warm, wet knife, and cover them with buttered paper; then poach carefully for about fifteen minutes in just sufficient boiling water to reach nearly to the tops of the moulds. When done enough, turn the creams out very carefully on to a flat-topped potato border and fill in the centre with a mound of skilfully cooked green peas, French beans, or some other suitable vegetable; coat the creams and the potato border with rich, well-made maitre d'hôtel sauce, pour more sauce round the base, and send to table as quickly as possible.

CROQUETTES.—Take the remains of either roast or boiled chickens, and after rejecting all skin, bones, &c., mince the meat very finely. Supposing there are six ounces, mix with it three ounces of lean ham or bacon and half a dozen button mushrooms chopped small. Put into a stewpan an ounce of butter, and as it melts stir in gradually an ounce of fine flour; then when quite smooth add a few tablespoonfuls of white stock or cream, and continue stirring until the flour is sufficiently cooked, after which draw the stewpan on one side and add the mince, also some strained lemon juice, salt, pepper, and a little mace or nutmeg. Mix the various ingredients thoroughly, then turn the mixture out on a flat dish to cool. When quite cold make it up into small fancy shapes, such as cutlets, corks, balls, rolls, squares, diamonds, &c., according to taste. Brush these over with beaten egg, cover with a smooth coating of fine breadcrumbs, and fry in plenty of clean boiling fat until lightly and daintily browned. Arrange the croquettes in a circle on a hot dish, fill in the centre with fresh crisp watercress. garnish the edge of the dish with sliced lemons and tomatoes, and serve quickly.

PATTIES.—Prepare a delicately flavoured mince with six ounces of cooked fowl, three ounces of cold ham, and a seasoning to taste of salt, pepper, finely chopped parsley, grated lemon rind, and either a few minced mushrooms or a small quantity of mushroom powder, and make it thoroughly hot in a stewpan containing two ounces of butter, into which has been smoothly kneaded one ounce of fine flour; moisten with a little milk or good stock, and stir all the time, then turn it out to cool. Line out some small rather deep patty tins with good short pastry rolled out thin, three-parts fill them with the mince, and cover with a lid of the pastry; moisten the edges and press them firmly together, brush the tops over with beaten egg or milk, make a small hole in the centre, and bake in a brisk oven from ten to fifteen minutes. Serve either hot or cold, neatly arranged on a folded napkin or fancy dish-paper, and garnished freely with parsley.

SANDWICHES—HOT AND COLD.—When carefully prepared and neatly served these form a dainty and most appetising little dish, and one which is decidedly economical. Cut some slices of stale bread a quarter of an inch thick and stamp them out in rounds or

squares about two and a half inches in diameter; fry these in butter or clarified beef dripping until lightly and evenly browned, then drain well and put them together in twos with a layer of savoury paste (prepared as below) between; press them firmly together and place them side by side on a baking sheet; grate some good cheese rather thickly over the tops and bake in a well-heated oven for a few minutes. Serve as hot and as quickly as possible, neatly arranged on a napkin and garnished with sprigs of crisply-fried parsley. The paste required is prepared as follows: Chop the meat very finely with half its weight in cooked ham, then pound it to a perfectly smooth paste, adding, during the process, the requisite seasonings, also a little warmed butter and a small quantity of either cream, gravy, or stock,

MR. HASSELBALCH'S POULTRY-FARM.

By W. A. KOCK.

ABOUT eight miles from Copenhagen, in a pretty country place called Rungsted, Mr. Hasselbalch has laid out a very fine poultry-farm opposite his summer residence. As shown in the illustration, the poultry-house is built of wood. Inside there is on both sides a passage, sleeping rooms, and scratching-sheds, and on the left is a good pigeon loft.

For the chicken and breeding-pens movable houses are used after English plans. The different runs are planted with fruit trees and bushes for shelter.

The owner is going in for Houdans, Faverolles, and the Belgian breed — Coucou de Malines. Last



THE POULTRY PLANT ON MR. HASSELBALCH'S POULTRY-FARM. [Copyright.]

but just barely sufficient to moisten the meat, as it must not, on any account, be at all sloppy. If the sandwiches are preferred cold prepare the paste in the same manner and spread it between slices of well buttered, one-day-old bread; press these firmly together and cut into neat finger pieces or triangles; serve in a tastefully arranged pile, garnished with a border of carefully washed, well seasoned watercress and slices of fresh cucumber.

Roof Poultry Yards.

Intensification proceeds apace. *Profitable Poultry* tells the story of a Miss Sanderson, who is conducting a poultry plant, and with apparent success, on the roof of Quincy House, a large building in the heart of Boston City.

month he imported some good Houdans and Faverolles from England.

Incubators are used, and there is a special house for winter chickens. A good many of the young birds, especially the cockerels, are fattened after English methods, and used in the household.

Sleeping Sickness and Fowls.

Many attempts have been made to make poultry responsible for the spread of various diseases. One of the latest is an inquiry as to sleeping sickness, that fell Central African disease, but, as recorded in the proceedings of the Royal Society, the experiments recorded show that the Uganda fowl cannot act as a reservoir for the virus of sleeping sickness.

AN EXHIBITION OF AIDS FOR THE POULTRY - KEEPER.

THE Dairy Show of 1911 is fast becoming a pleasant memory, but the outstanding merit of the Appliance and Foods Section, included in the comprehensive expression "the Stalls," deserves a special note.

ALLEN POULTRY CO., LTD., Sawbridgeworth, Herts, had a selection of poultry foods, medicines, and books.

ARMITAGE BROS., LTD., 27, Castlegate, Nottingham. Here we found foods for chicken and dogs. Especially noteworthy was a special food for conditioning exhibition birds, which, containing certain seeds of an oily nature, is a splendid feather producer.

ASHBY AND SONS, JOSHUA, Brixton Flour Mills, S.W., showed a choice collection of their high-grade foods.

BETHELL, THOMAS P., Crown Works, Boundary Lane, Liverpool. Egg boxes, especially the "Raylite," for everybody.

CLARKE, W. G., AND SONS, Thomas Street, Limehouse, E. "Vigam" for fowls was the attraction here. A real and complete food, not a condiment, say Messrs. Clarke, who offer samples of all varieties of poultry foods free on application.

COLUMBIA POULTRY YARDS, Colnbrook, Bucks, had some appliances of original design, which render it possible to rear the best stock with the least possible worry and expense. The "Ther-Mother" invented by Mr. Chipman is worth attention.

COOK, WILLIAM H., The Model Poultry Farm, St. Paul's Cray, Kent. Mr. Cook had a selection of poultry foods, grit, oyster shell, medicines, and photographs of prize-winners: Orpingtons, Minorcas, and others. As one who had a share in the production of the extremely popular Orpington fowl, this expert's advice was in constant request, and samples of his celebrated specialities were continually asked for by visitors.

COOK, WILLIAM, AND SONS, Orpington House, St. Mary Cray, Kent, had a good display. Their book, "The Practical Poultry Breeder and Feeder; or, How to Make Poultry Pay," was, of course, on view. They also had their Biscuit Meal, containing ten per cent. Meat and no Shell; their Special Poultry Meal, a non-fattening egg-producer of good repute; their well-known Roup Powder and Roup Lotion, the splendid testimonials to their value which they have received recently being most convincing; and their Poultry Powder, which they claim helps the hens through the moult safely, ensures an abundance of eggs, and does not over-stimulate. The heads of this well-known firm were in constant attendance, and their advice was eagerly sought and freely given. As the originators of the Orpington fowl their fame is world wide.

COOPER, G., AND SON, Branford, Ipswich. "Lukchic" for rearing chickens, turkeys, and game,

called by many the King of Dry Foods, was shown. This is specially useful for Silkies and Bantams. Many other mixtures were exhibited.

CRAVEN, T., AND SONS, 97 and 99, Corporation Street, Manchester. Several novelties were to be seen. The Kikeriki Automatic Safety Trap-Door for poultry houses; the Perfection Bone Cutter, an apparatus on an entirely new principle; and a clever trap nest front to fit ordinary sugar-boxes.

CYPHERS INCUBATOR CO., 119 to 125, Finsbury Pavement, E.C. One of the features of the Stall was the very full catalogue "Profitable Poultry Raising," which was a guide book to their exhibits. The Standard Cyphers Incubator in various sizes; the Indoor and Outdoor Brooders; the Adaptable Hover, and Fire-proof Brooder Heater; and chick shelters were on view. Many special foods, especially the various grades of Alfalfa, attracted attention, as did their numerous other special poultry requisites.

DEPENDENCE INCUBATOR CO., LTD., Cambridge Street, Birmingham, showed incubators, poultry-rearers, and houses and useful sundries.

FINCH AND FLEMING, LTD., Flitwick, Beds. The "F and F" Incubators, Brooders and other poultry requisites. The many good points of all were explained to interested visitors, and the storm-proof brooder, with top heat, top light, and automatic ventilation, was much admired.

GILBERTSON AND PAGE, LTD., Hertford. The firm showed their "Gilpa" Incubators and Foster-Mothers; Renardine, a powder with many uses, not the least of which is, that it protects poultry from foxes; self-filling water troughs; and other useful things.

HEBDITCH, HARRY, Martock, Somerset, had poultry appliances of many kinds, and Preserolium, his special wood preservative.

HOBSON, J. T., AND CO., New Wharf, Bedford. The Firm's Bargain List No. 35 was in continual request, and a selection of the goods listed therein was on view. The "Gleaner," a genuine farmer's friend, seemed much liked.

INCUBATOR COMPONENTS CO., Gloucester. The "Gloucester" Incubators and Brooders, new designs for 1912, were exhibited. The patent self-filling lamp; the mechanical wick trimmer; the new nursery drawer device, and automatic regulator conspire to make the poultry-keepers' lot a happy one. The "Gloucester" Outdoor and Indoor Brooders are worthy of the name, which is saying a good deal. Every need of the chick is anticipated, and every labour-saving device for the owner is provided.

LIVERINE, LTD., Grimsby. Mr. King's remarkable invention, a valuable article of avian diet, is still in great demand, and the proprietors wisely insist on its economical character. They supply many other foods and a valuable assortment of medicines.

MARSHALL, JAMES, 12, Regent Quay, Aberdeen, offered an artistic list of his productions labelled "Of Vital Importance." His "Simplex" Egg-Case, especially the form with ironclad fittings, is wonderfully strong. Other excellent cases were shown, the "Duplex," the "Unity," the "Bentrovato"—a combination case for eggs, butter, and poultry, the "Excelsior"—for sittings, which meet all reasonable requirements. The list is full of useful information as to railway rates, modes of packing, etc., and fully justifies its title.

MEECH, RANDOLPH, The West of England Poultry Appliance Works, Poole, Dorset. To deal with a gigantic display like Mr. Meech's requires an essay rather than a note. The "City" Fireless Brooder and Coop, the "City" Developing Coop, the novel double-decker house, and sprouting boxes, all excited a lively interest. In the two-story house hens were to be seen which had been hatched and reared in the "City" appliances, never having been outside them, and the prospective small-holder should study Mr. Meech's hints. The other houses shown by this "Pioneer of cheap poultry appliances" were up to his own high standard, but as everyone should get his useful list, the enquirer may be referred thereto.

MOLASSINE CO., LTD., Greenwich, S.E. The Molassine Chicken Food and the similar poultry food were much praised. The firm guarantee the use of the purest ingredients only, and claim that the good results are due to their natural antiseptic properties. The Molassine Meal, a part food as distinguished from the whole foods first mentioned, is stated to effect marvellous improvement in the condition and plumage of prize birds. The food cakes and meals for the poultryman's dogs were in demand.

NEAVERSON, ARTHUR, Peakirk, Peterborough. The self-cleaning house appeared fully worthy of the thirty medals it has been awarded.

NEWTON, CHAMBERS AND CO., LTD., 331, Gray's Inn Road, W.C. The very many uses of Izal, in its various forms, for poultry, in health or disease, are now so well known that it is scarcely necessary to enlarge on the fact that an efficient disinfectant is indispensable in every well-conducted yard. In the treatment of scaly-leg, for instance, the preparation more than repays its cost. Besides the famous Izal fluid (veterinary and ordinary) we saw Izal powder, soaps, cream, lozenges, etc.

PETTIFER, STEPHEN AND SONS, Crudwell Chemical Establishment, Malmesbury, Wilts. Besides veterinary specialities, for which the firm has a fifty years' reputation, we found a display of their poultry remedies, now "as familiar as household words." Walton's Tonic Paste, preventative and restorative; Roup Pills, which "used in time never fail"; the same cure in powder form for use in drinking water; Walton's Gape Cure Inhalant Powder; Concentrated Poultry Spice; and their Poultry Ointment for white comb, etc.

PHIPPS, A. E. W., Midland Works, Harborne, Birmingham. The "Perfection" Incubator continues to merit its name, and the Art Catalogue issued by Mr. Phipps is a most convincing document.

Houses and poultry appliances to suit all tastes are therein depicted.

"PHOSTO" CO., THE, Emsworth, Hants, had Mr. Arthur Hartley, F.C.S., the inventor, in attendance to explain the action and value of "Phosto."

QUEENBOROUGH DOG, GAME, AND POULTRY FOOD CO., LTD., Queenborough, Kent. Here we found the Castle Foods for poultry; "Fox-erine," a preparation for keeping off Master Reynard; a self-filling fountain, the invention of Mr. F. Matthews, etc.

POORE, WILLIAM, AND CO., 52, Queen Victoria Street, E.C. A collection of stoves for the poultryman's use.

ROBINSON'S PATENTS, LTD, 332, Goswell Road, London, E.C. The well-known "Anti-Smash" and other egg boxes were exhibited.

SERVICE, JOHN, Poultry Appliance Maker, Arkley, Barnet, had Novel Exhibition Training Pens and other poultry requisites.

SNELL, WILLIAM FOLLETT, Utility Appliance Works, Yeovil, Somerset, showed the "Easy-clean" house, and sparrow-proof coop, etc.

SPILLERS AND BAKERS, LTD., Cardiff. The Victoria Poultry Food, claimed to be a scientifically-prepared adjunct to grain food, not a condiment, but a vital necessity for fowls kept in confinement, was exhibited. We also saw Chicken Meal; Dry Chick Feed; "Ovalatine," a spiced food; all of the same excellent quality. A wide range of dog biscuits were on view, and those who love the friend of man were pleased to find pictures of many celebrated prize dogs in the catalogue.

SPRATT'S PATENT, LTD., 24 and 25, Fenchurch Street, E.C. The firm state that everything required to make poultry-farming a success is supplied by them, and their manual of chicken and poultry culture bears out their claim. The booklet, with its coloured pictures of Campines, and Rosecomb Rhode Island Reds, was much sought after. The stall contained specimens of most of their poultry specialities, and was the centre of a crowd of interested fanciers. The Hearson Incubator, of which it is boasted that, given an intelligent application of a few simple rules, the machine does the rest, was occupying a prominent position.

STANLEY UNDERWOOD CO., Lynchmere, Haslemere, Surrey. This firm specialise in Cleft Chestnut Fencing, an entirely English production which gained the Silver Medal both at the Royal Agricultural and Sussex County Agricultural Shows in 1910. They also supply charcoal, hop-poles, and similar things. The many possible uses of their useful and artistic fencing should induce poultry folk to obtain the list and compare prices. Style D, a combination of chestnut pales and galvanised chicken wire, is noteworthy.

STEPHENS, HORACE W., Linden Road, Gloucester. Here we found the improved "Glevum" Felt-Diaphragm, Self-Ventilating, Self-Regulating, Non-Moisture Incubators and Brooders, all designed on the diffusive principle. A fully guaranteed machine offered on a sixty days' trial. The inventor

claims there is absolutely no danger of fire, and by an ingenious device the machine is equally adapted for either duck or hen eggs. The catalogue explains these clever improvements fully and convincingly.

STILES, A., Springbank Mills, Heathfield, Sussex, showed the Springbank Chick-Rearing Meal and a Laying-Meal containing meat and mustard.

TAMLIN, WILLIAM, St. - Margaret's Works, Twickenham. The greatest interest was centred round the incubator—the Nonpareil—with the patent automatic self-supplying lamp, and all the latest improvements; but we saw rearers, bone-cutters, houses, coops for all uses, new pattern trap nests, food choppers, crammers, grit smashers, egg boxes, drinking fountains, grit, shell, meals, and foods—everything it is possible to conceive necessary, in fact, for successful poultry-rearing and keeping. The "Colnbrook" Duck House, the "Harlington" Scratching shed, the "Whitton" cockerel pen are merely samples of the many bargains Mr. Tamlin's list discloses. Our readers should avail themselves of his offer to send his full catalogue.

THORLEY, JOSEPH, Ltd., King's Cross, W.C. The Ovum spice for game and poultry made a good display and attracted our attention, and a very useful booklet was being distributed entitled "The Advantages of Keeping Poultry," which might be termed wise hints well expressed. The claims for Ovum are great: if given regularly with the soft food it fortifies the constitution and brings pullets into the healthy condition to produce abundant eggs, besides being a great standby at moulting time.

THORPE, ALBION, AND SONS, Rye, Sussex. The celebrated products of this firm were well to the fore. Their new branch, the reliable medicines invented by Mr. George A. Palmer, for which they are the sole agents, seems to have taken on with the Fancy. Their great merit is rapidly becoming realised. Then the various foods. Here we found, as usual, the genuine Sussex Ground Oats, produced at the firm's own mills; the Sussex Fattening Meal, largely used by the crammers; "Cock o' the Walk" Meal, an economical feed and a splendid conditioner; "Lactoma," a chick meal with dried milk, and many other good things.

TOOPE, R., AND CO., 15, Stepney Square, High Street, Stepney, E. The Asbestic Hen Incubator was shown at work, the machine in question having the electric internal lighting attachment. The firm state that this is the only incubator the insurance companies will accept at normal premiums; the Coronation grain sprouter is a useful novelty, likely to be of great use in winter; the Automatic Non-Freezing Poultry-Fountain, a great boon during the same inclement season; nor must we forget the firm's ingenious drying or "fluffing" machine.

WESTMERIA CO., THE, Leighton Buzzard. An artistic display of incubators, brooders, and houses. A distinguished critic described this exhibit to us as a stall of appliances *de luxe*, and there was such a run on the firm's catalogue that the supply was exhausted early on Wednesday. Their very well-designed brooder was in evidence, and deserves the term applied to it—high-class and reliable. A scratching-shed, constructed on the most up-to-date lines, was much admired.

INTERESTING ITEMS FROM OUR COMMONPLACE BOOK.

Turkey versus Beef Flesh.

First, it may be said that weight for weight the flesh of the turkey is more nourishing than that of beef, but the latter is, generally speaking, cheaper than the former. The moisture in beef, however, exceeds the amount present in the flesh of the turkey, and the latter contains a better percentage of proteid or flesh-forming substance. In either case the percentage of moisture is seldom less than 70 per cent. In lean beef the amount of fat is much the same as in a not too well-fed turkey, but it must be pointed out that the flesh of poultry differs from that of beef or mutton in not having its muscular fibres permeated by fat; moreover, the fibres in the flesh of the fowl are short and readily yield to the disintegrating action of the digestive processes.

A large amount of fat in either case is apt to interfere with the digestibility of the meat. The fat of beef is more digestible than the fat of the turkey. The fat of birds, in fact, is harder and, owing to its tendency to become rancid, is unsuitable for the dyspeptic patient. Perhaps the most important difference, however, from a dietetic point of view between beef and turkey is that whereas beef contains a high percentage of extractive matters, turkey contains hardly any at all. But there is no doubt that the extractives of beef as well as of mutton are valuable, for not only are they flavouring agents, but they also act as, perhaps, the most powerful stimulants to gastric digestion.—*The Lancet*.

How Hens originated the Railway Whistle.

Who would imagine the marketing of eggs could have anything to do with inventing the railway whistle? When locomotives were first built and began to run up and down the newly and rudely constructed railways of England, the country roads were, for the most part, crossed at grade, and the engine-driver had no way of giving warning except by the insufficient method of blowing a tin horn.

One day, in 1833, a farmer of Thornton was crossing the railway track with a great load of eggs and butter, but failed to hear the tin horn of an approaching train. Eighty dozen of eggs and 50lb. of butter were smashed into an unpleasant mass, and mingled with the kindling wood to which his wagon was reduced.

For all this loss the railway company had to pay the farmer. It was regarded as a very serious matter, and straightway a director of the company, Ashlen Bagster by name, went to the Grange where Geo. Stephenson lived, to see whether the latter could invent something that would give a warning more likely to be heard.

Stephenson went to work, and the next morning had a contrivance, which the delighted directors ordered to be attached to all their locomotives, and that gave, and still gives, when steam is turned on it, the familiar shrill whistle.—*The Cable*.

George Stephenson and Artificial Incubation.

"Curious about everything relating to birds, George Stephenson determined to test by experiment the art of hatching birds' eggs by means of artificial heat.

He brought a collection of eggs of all kinds into the engine-house, set them in flour in a warm place, covering the whole over with wool, and then waited the issue of his experiment. But though the heat was kept as steady as possible, and the eggs were turned every twelve hours, they never hatched. The eggs chipped, and some of them exhibited well-grown chicks; but none of the birds came forth alive." Later on in his life, when he had retired to Tapton, "he remembered the failure of his early experiment in hatching birds' eggs by heat, and he now performed it successfully. When his friend, Edward Pease, of Darlington, visited him at Tapton, he explained a method which he had invented for fattening chickens in half the usual time. The chickens were shut up in boxes, which were so made as to exclude the light. Dividing the day into two or three parts, the birds were shut up at each period after a heavy feed, and went to sleep. The plan proved very successful, and Mr. Stephenson jocularly said that if he were to devote himself to chickens he could soon make a little fortune."—*Samuel Smiles*.

Curing a Cat of Chicken Eating.

If a cat catches chickens, tie one of her victims about her neck. Fasten it securely, for she will make incredible efforts to get rid of it. Be firm, and the cat is cured, and will never again desire to touch a chicken or bird.—*Farm Journal*.

Doctored Poultry Flesh.

Last week I purchased from a man, with whom I had often previously dealt, a pair of fowls for roasting, properly drawn, trussed, and prepared for the kitchen. They were very good, of a fair size, and plump birds. We had them roasted last Saturday for cold dinner on Sunday. On cutting one of them for a slice out of the breast, and afterwards to sever the wing, I observed there was—apparently mixed with the white meat of the breast—a brown substance like forcemeat, or liver, streaking the meat. My family ate it with some ham, and we all remarked it was somewhat strange and dry eating. I afterwards cut the other fowl, and then discovered that the whole of the white flesh had been cut and abstracted clean from the breast-bone, close down to the pinion and merrythought, and the space filled up with two pieces of roasted lean pork. The skin of the breast had been cleverly cut and brought back—either from the point of the breast, near the tail, to the neck, or *vice versa*—and the space filled up and beautifully rounded, and the fowl looked more than ordinarily plump and attractive. I am a very good carver, and could not be deceived after cutting into it. I have, therefore, felt sure that the fowls had had their white meat taken from them to make a *suprême de volaille*, or other expensive *entrée*, and instead of the frame of the bird being thrown into the stock pot, was reserved and sold, perhaps, at about 9d., and beautifully doctored—at a cost of another 3d.—and then sold to me at half-a-crown. This is so ingenious a plan, and was so cleverly done, that an old soldier like myself has been thoroughly taken in; and I think this should be made public, and a warning given to others that they may not be so thoroughly deceived as your contributor.—J. K. FOWLER, in *The Stock-Keeper*.

MARKETS & MARKETING.

Week Ending September 30.

Poultry supplies were plentiful, but the trade was sluggish, and prices were not particularly good. Goslings were rather scarce, with the result they realised good figures. The quality, on the whole, of the Michaelmas geese was extremely good. Game of all kinds was scarce, grouse being wanted especially.

The egg trade was firm, and fair prices for the time of year were realised.

Week Ending October 7.

The cooler weather improved the poultry trade, and while prices did not rise appreciably, owing to the large supplies, there was a better tone in the trade generally. Good geese were scarce, and made excellent prices. There was a good deal of inferior stuff on the market however, which dragged somewhat. Pheasants were more plentiful, so were partridges and hares. Grouse were still very scarce.

New-laid eggs were rather scarce, and made good prices.

Week Ending October 14.

The market was rather depressed, owing, probably, to the fact that supplies were very plentiful indeed. Small chickens were very cheap. Poultry sold badly, too, owing to the heavy supplies of game, especially pheasants and partridges.

New-laid eggs, which were *really* new-laid, sold very readily, and made excellent prices. Some shops in the West-End were charging twopence each for them.

Week Ending October 21.

There was no improvement in the poultry trade, chickens of all sizes selling very slowly. Pheasants were in great request, and made good prices. Hares were plentiful, but purchasers were few.

New-laid eggs advanced somewhat in price, and we are rapidly approaching the scarce season.

A Problem for Temperance Advocates.

M. Joubert, Professor at the Agricultural College at Fontainebleau, claims that he has discovered a new and simple method of making hens lay. He feeds them with wine in addition to their ordinary food. In every case, after six separate trials, the wine-fed hens laid more eggs in the proportion of twenty eggs a month or thereabout. This is a fine story, which we commend to the notice of the rhetoricians at teetotal meetings.

(1) Is it moral to stimulate the laying propensities of the harmless necessary hen by these insidious devices?

(2) What is the ultimate effect upon the character and conduct of the hen of a prolonged course of alcoholic stimulation? Does it ruin her health and undermine her morals?

(3) Is it lawful for a professed teetotaler to eat an egg which has been laid by a hen under the influence of liquor?—*Edinburgh Evening Dispatch*.

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS DURING THE FOUR WEEKS ENDING OCT. 21, 1911.

ENGLISH POULTRY—LONDON MARKETS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Each.	Each.	Each.	Each.
Surrey Chickens	2/6 to 4/6	2/6 to 4/6	2/6 to 4/6	2/6 to 4/6
Sussex "	2/6 " 4/6	2/6 " 4/6	2/6 " 4/6	2/6 " 4/6
Yorkshire "	2/0 " 3/3	2/0 " 3/3	1/6 " 3/0	1/6 " 2/9
Boston "	2/0 " 3/3	2/0 " 3/3	1/6 " 3/0	1/6 " 2/9
Essex "	2/0 " 3/3	2/0 " 3/3	1/6 " 3/0	1/6 " 2/9
Capons	1/6 " 2/6	1/6 " 2/9	1/3 " 2/3	1/3 " 2/3
Live Hens.....	1/3 " 2/3	1/3 " 2/3	1/3 " 2/3	1/3 " 2/3
Aylesbury Ducklings	2/0 " 2/9	1/6 " 3/0	2/0 " 3/0	2/0 " 3/0
Ducks	4/6 " 8/6	5/0 " 7/6	5/0 " 7/6	4/6 " 6/6
Geese	5/6 " 8/0	5/0 " 8/0	5/0 " 8/0	5/0 " 8/6
Turkeys, Cocks	5/0 " 6/0	4/6 " 6/0	4/0 " 6/0	5/0 " 6/6
" Poults				

ENGLISH GAME—LONDON MARKETS.

DESCRIPTION.	Each.	Each.	Each.	Each.
	Each.	Each.	Each.	Each.
Grouse	2/6 to 3/0	3/0 to 3/6	2/0 to 2/9	2/0 to 2/6
Partridges.....	1/6 " 2/0	1/6 " 2/0	1/3 " 1/6	1/3 " 1/6
Pheasants	2/0 " 3/0	2/0 " 3/0	2/0 " 2/9	2/0 " 2/9
Black Game	1/6 " 2/3	1/9 " 2/6	1/5 " 2/6	1/6 " 2/3
Hares	1/3 " 3/0	1/3 " 3/0	1/0 " 2/9	1/0 " 2/6
Rabbits, Tame	1/0 " 2/6	1/0 " 2/3	1/0 " 2/3	1/0 " 2/3
" Wild	0/4 " 1/0	0/6 " 1/0	0/6 " 1/0	0/6 " 1/0
Pigeons, Tame	0/6 " 0/10	0/6 " 0/10	0/6 " 0/10	0/6 " 0/10
" Wild	1/6 " 2/0	1/6 " 2/0	1/6 " 2/0	1/6 " 2/0
Wild Duck	0/6 " 1/0	0/9 " 1/3	0/9 " 1/0	—
Snipe	0/11 " 1/0	0/11 " 1/1	—	—
Partridge.....	0/4 1/2 " 0/6	—	—	—
Venison (per lb.)				

ENGLISH EGGS.

MARKETS.	Per 120.	Per 120.	Per 120.	Per 120.
	Per 120.	Per 120.	Per 120.	Per 120.
LONDON	12/- to 13/-	12/- to 13/-	13/- to 15/-	14/- to 16/-
Provinces.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.
MANCHESTER ...	1/2	1/3	1/4	1/4
BRISTOL	1/3	1/4	1/5	1/6

FOREIGN POULTRY—LONDON MARKETS.

COUNTRIES OF ORIGIN.	PRICES REALISED DURING THE MONTH.				
	Chickens. Each.	Ducks. Each.	Ducklings. Each.	Geese. Per lb.	Turkeys. Per lb.
Russia	—	—	—	—	—
Belgium	—	—	—	—	—
France	—	—	—	—	—
United States of America	—	—	—	—	—
Austria	—	—	—	—	—
Canada	—	—	—	—	—
Australia	—	—	—	—	—

IMPORTS OF POULTRY AND GAME. MONTH ENDING SEPT. 30 1911.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Game.	Poultry.
Russia	£30	£1,132
Austria-Hungary	—	—
France	—	£2,048
United States of America	—	—
Other Countries	£3,121	£3,080
Totals	£3,151	£6,260

IRISH EGGS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	10/0 to 12/0	10/5 to 12/6	11/6 to 13/6	11/6 to 14/0

FOREIGN EGGS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
French ...	10/0 to 12/0	10/6 to 12/6	11/6 to 13/3	11/6 to 13/6
Danish ...	10/0 " 12/0	10/6 " 12/3	11/6 " 13/3	12/0 " 13/6
Italian ...	10/0 " 11/3	10/3 " 11/6	11/3 " 12/3	11/3 " 12/6
Austrian ...	7/9 " 10/0	7/9 " 10/0	8/0 " 10/3	8/6 " 10/6
Russian ...	7/3 " 9/6	7/3 " 9/6	7/3 " 9/6	7/6 " 10/0

IMPORTS OF EGGS.

MONTH ENDING SEPT. 30, 1911.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Quantities in Gt. Hund.	Declared Values.
Russia	1,031,190	£402,463
Denmark	325,078	£167,786
Germany	11,292	£4,600
Netherlands	31,776	£16,379
France	33,227	£16,775
Italy	21,422	£9,844
Austria-Hungary	45,884	£18,701
Other Countries	35,340	£16,357
Totals.....	1,535,209	£652,905

A MEDICINE FACTORY.



IGNORANCE of how to deal appropriately with disease is responsible for more failures in poultry ventures than all the other factors, such as high freights, dear food, and bad markets, against one or all of which the industry is from time to time called upon to contend. For of poultry farming, as, indeed, of the farming of all kinds of domesticated live stock, it may truly be said that as health is to disease so is profit to loss.

The poultryman may be thoroughly well up in rearing and feeding; the farm may have been

have been lost, and then perhaps he meets someone who gives him the advice, as ludicrous as it is mischievous, "to kill off the lot and begin again, for it is no use to doctor sick fowls." We often wonder what a breeder of racehorses or a cattle-farmer would say were he tendered like advice, simply because some of his animals were affected with epidemic disease? But our unfortunate poultry-farmer, depressed by the magnitude of the disaster, needs little urging to carry out the first part of the advice. He declines, however, to try again, and henceforth is never tired



A CORNER OF THE LABORATORY.

[Copyright.]

laid out with the most scrupulous attention to modern requirements; the capital ample; and the market good and handy. With ideal surroundings all goes well with the poultry until, perhaps through the agency of a freshly-manured field, accidental access to stagnant and polluted water, or sudden wet and cold weather, some infectious disease breaks out. Before it the owner is helpless, and if he is one of the old peppercorn school, he will probably administer some aromatic poultry spice all round, change his corn merchant, and pray that Providence may stay the rot. But Providence does nothing of the kind, and the mortality goes merrily on until, it may be, two-thirds of the total number of birds on the farm

of pouring into the ears of all and sundry that poultry cannot be made to pay.

Fortunately for the poultry-keeper there are some really excellent remedies on the market at the present time, a careful and proper use of which goes far to maintain poultry in a healthy and sound condition. Whilst visiting the stand of Messrs. A. Thorpe and Sons, the food specialists of Rye, Sussex, at the recent Dairy Show, we were extremely interested to learn that the new development which took place in their business a few months ago—namely, the manufacture of poultry medicines—has proved very successful indeed. As a matter of fact, we were greatly surprised to find what an enormous

trade in medicines they are doing. We knew they were experiencing a good demand, but we did not know that the business had already attained to such large proportions.

All the poultry medicines are prepared from the prescriptions of Mr. Geo. A. Palmer, the well-known poultry expert, from whom Messrs. Thorpe have obtained the sole rights of manufacture and distribution. For some years past they have been sold and used by Mr. Palmer amongst his own poultry, and have thus been well tried and tested. A specially fitted laboratory has been installed at Rye, where all the medicines are made. Our illustration shows a corner of this laboratory, but it does not do it justice, since it was difficult to obtain a good photo. It is impossible to make mention of all the many and various remedies. Suffice it to say that there is a cure for almost every complaint. Special mention should be made of Palmer's Cholera and Enteritis Cure, which has proved remarkably successful in several serious epidemics. During the last few months a very grave and widespread cholera outbreak has been raging in parts of Wales, particularly in Radnor and Brecon, but a user of this cure writes to say "the fowls are dying all around me; but, thanks to your medicine, mine are safe." Among other valuable remedies are Palmer's Roup Cure, Palmer's Tuberculosis Cure, Palmer's Gapes Cure and Preventive, Palmer's Preventive Roup Powder, and Palmer's Liver Cure. Messrs. Thorpe and Sons will gladly furnish full particulars on request.

ARE EGGS TO BECOME A LUXURY? OR SHALL THEY REMAIN A REGULAR ARTICLE OF DIET?

By EDWARD BROWN, F.L.S.,

Hon. Sec. National Poultry Organisation, Society, Limited.

MANY years ago, probably about fifty, a cartoon appeared in *Punch*, in which a customer noting the advancing price of oysters, said in alarm, that at the rate of increase they would soon be, I think, 2s. per dozen? Such point was soon reached and passed. Oysters of almost every kind are a luxury denied save to the very few. The question arises, are eggs to become in price beyond the reach of the ordinary householder, who, during the last two or three decades, has begun to regard them as a valuable item in the daily diet? We can do without oysters. To be compelled to omit eggs would be serious indeed.

The pressure of life is great everywhere. Prices are rising, which, to the majority of our people, means limitations of purchasing power. It is an economic axiom that an advance of prices, save in what may be regarded as absolute necessities, is followed by reduction of consumption. Nor can it be otherwise.

There is a limit beyond which we cannot go. Such needs only be stated to find acceptance. Traders tell us that every advance of 3d. per dozen for eggs is followed by a corresponding diminution in the sale or a transference to lower grades, or both. That is a fact of everyday experience, and more especially when other commodities are also rising in values.

It is unnecessary to give figures showing the advances in prices of eggs, as these are apparent to all, and have been published freely of late. Such is found to be the case everywhere at home and abroad with foreign and native produce. Perhaps the Britisher is suffering less than are others, but it is no satisfaction to him when he has to pay more by 25 per cent. for the same quality as before if Germans and Americans have to pay 50 per cent. His own pocket is what appeals to him. When rates are advanced unduly, except where money is abundant, he either goes without or reluctantly purchases the lower-priced eggs, even though they are inferior. Recently I was staying in one of the Midland Counties, and was discussing this question with my host and hostess. The former was inclined to contest my views, but his wife stated that when eggs were dear she bought fewer. "Oh," he said, "is that why I have had no egg with my bacon at breakfast this week?" "Yes," was the reply. It is this check to consumption we have to fear, especially in respect to home produce, which this year is dearer than has ever been known before.

Producers like high prices. It is natural they should do so. That is legitimate, and up to a point desirable. But there is a limit. It is to the producer's best interest to stimulate consumption, from which greater demand will arise. That, however, will be checked if prices are unduly advanced. There are two ways of obtaining enhanced returns. First and foremost, by so improving the quality, by improved methods of production, and by more expeditious marketing, so that the lower grades are raised into a higher rank, wherein prices are better. That is what we have striven for during the last dozen years, and with a considerable amount of success. The second is by forcing up prices which are already high enough, the only result of which is to reduce consumption and demand. It is the former we should promote rather than the latter. Personally, I have no sympathy with the cry that we should pay more than the value for home produce. The advantages our people have with perishable products like eggs are so great that they can practically control the new-laid egg market when they take the trouble to out-distance their rivals. All such ideas, such as marking of foreign eggs, that are advocated, are in order to set up a fictitious value and to obtain money for qualities that are often absent. It is freshness and fulness and flavour we pay for, no matter where the egg is laid. If poultry-keepers could increase the winter output of eggs so that the retail price was never more than 2s. per dozen, and even that merely for a week or two in November, the enhanced consumption would make the business more profitable to them than now, when for weeks very few eggs are obtainable. The fact of prices being high is of no benefit to the man who has nothing to sell.

That the cost of production has increased is unquestionable, owing to the rise in the price of food-stuffs. But it is more than compensated by the

increased returns. Where methods adopted are satisfactory, but unfortunately such is not generally true, the industry was never more profitable than at present. What we have to seek for are newer foods and less wasteful systems of feeding, improved methods of management, greater average production from the individual hen, and reduction of intermediate expenses in marketing, with expedition in transit from nest to breakfast-table.

The question is of importance to all, producers and consumers alike, more especially in view of diminishing foreign supplies, which have heretofore had the desirable influence of stimulating a desire for eggs as food, and checked the tendency to inflation of prices, to which producers are prone. We should seek to increase home production and thus prevent that shortage which will, if continued, assuredly so enhance values as to reduce consumption to a large extent.

THE POULTRY CLUB.

AN extraordinary meeting of the Council was held at the club's private room (in the gallery), Agricultural Hall, Islington, N., on Tuesday, October 3, at 3 p.m., when there were present Messrs S. C. Court, J. S. Hicks, T. Threlford, F. Bloomer, David Reid, J. Horn, W. Rice, W. Clarke, F. J. S. Chatterton, W. A. Jukes, W. J. Golding, H. Wallis, W. G. French, C. N. Goode, Rev. E. Lewis Jones, Captain R. R. Allen, and G. Tyrwhitt-Drake, hon. secretary and treasurer.

Mr. P. H. Bayliss, hon. secretary of the election sub-committee, read the report as follows:—President, Rev. T. W. Sturges, unopposed. Vice-presidents: Section 1, Messrs. R. Watson, 388; F. Tootill, 179. Section 2, F. Bloomer, 187; C. Watson, 159; R. F. Hearnshaw, 63; Rev. J. B. Nodder, 61. Section 3, W. Rice, 305; W. A. Jukes, 136; W. H. Cook, 37; A. C. Gilbert, 29; G. E. Pentelow, 21. Section 4, T. Threlford, 226; W. W. Broomhead, 141; Max de Bathe, 132; F. J. S. Chatterton, 36; E. J. W. Buckpitt, 9; C. A. Simmons, 7. Wales, Rev. E. Lewis Jones, 372; S. W. Thomas, 87. Scotland, A. M. Prain, 379; D. Reid, 107. Hon. secretary and treasurer, G. T. Drake, unopposed. Hon. Solicitor, T. D. Dutton.

Mr. Bayliss then proposed, seconded by Mr. J. Horn and supported by Capt. Allen, that the report be received and adopted. Carried. Mr. W. A. Jukes then proposed, seconded by Mr. Bloomer, that a hearty vote of thanks and five guineas honorarium be granted to the hon. secretary of the election sub-committee. Mr. W. Clarke proposed, seconded by Mr. W. A. Jukes, that votes of thanks be passed on the other two members of the election sub-committee, Messrs. J. Horn and Capt. R. R. Allen. Mr. P. H. Bayliss, in supporting this, said he would also like to record his thanks to Mr. G. Tyrwhitt-Drake for the help he had given him. Carried.

The monthly meeting of the Council was held on Friday, October 6, at 12 o'clock noon, at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C., when there were present Mr. H. Wallis (chair), Rev. T. W. Sturges, Rev. E. Lewis Jones, Messrs. W. Clarke, W. Rice, J. Horn, T. Firth, T. F. Ramsey, C. N. Goode, R. Watson, T. Threlford, O. F. Bates, J. Wilkinson, W. Richardson, W. A. Jukes, W. G. French, F. J. Broomhead, J. S. Hicks.

The election of chairman and vice-chairman of the Council to act during the ensuing twelve months.—Mr. R. Watson moved that Mr. H. Wallis be appointed as chairman of the Council for the ensuing year, and stated that he proposed this in no way disparaging to the president, but because he

considered the joint office might be undesirable, as it was the president's duty to initiate new schemes, &c., whilst the chairman must act absolutely impartially when considering same. This proposition having been seconded by the Rev. T. W. Sturges and supported by Mr. W. A. Jukes, was carried unanimously. Mr. Wallis, in returning thanks, said that he would not have felt able to accept it had not Mr. Sturges seconded it, but under the circumstances he was willing to accept the office for another year. Mr. T. Threlford then moved that Mr. C. N. Goode be elected vice-chairman, stating that he thought that as the chairman came from the South it would be only right that the vice-chairman be elected from the North. Mr. Wallis having seconded this, it was carried unanimously.

The following societies were duly associated:—Wellington Poultry, Pigeon, and Cage Bird Club: Hon. secretary, C. Norman, 9, Waterloo Road, Wellington, Somerset. Woolston and District Fur and Feather Association: Hon. secretary, F. G. Etheridge, Meteor, Newtown Road, Woolston, Southampton.

Other important business was transacted.

The next meeting of the Council will be held on November 16 at the Crystal Palace. All prospective members' names must reach the hon. secretary on or before November 8, and if residing in a county having a branch, through the secretary of same.

The annual general meeting was held on Wednesday, October 4, at four o'clock, in the club room of the British Dairy Farmers' Association at the Agricultural Hall, Islington, London, N., when there were present H. Wallis (chair), Rev. T. W. Sturges, Rev. E. Lewis Jones, Mrs. Wilkinson, Mrs. A. M. Willett, Miss C. Rilott, Miss Carey, Miss Edwards, W. Clarke, R. W. Whittaker, J. W. Herbert, P. Hanson, T. King, J. R. Higgins, A. Hinton, A. Morris, L. R. Webb, H. Copley, H. Cole, S. Hunter, W. G. French, T. Whittaker, F. Tootill, G. W. Smalley, W. Rice, W. W. Broomhead, P. M. Knight, L. Gwyther, G. W. Gwyther, G. Carne, C. N. Goode, K. Willett, T. J. Stables, G. M. Bartlett, C. W. Washington, J. Barrow, J. Argent, H. Abbot, J. Squibb, S. Bamford, R. English, B. S. Porter, R. Stainthorp, W. Smith Lambert, A. M. Prain, T. Firth, D. Firth, H. Hesford, H. Carpenter, P. W. Goodwin, J. Carlton Hunting, A. Mather, C. Lawrence, J. F. L. Warburton, J. Pettipher, H. Hudson, W. Hodges, R. Fletcher Hearnshaw, W. H. G. Ewart, J. S. Hicks, S. C. Court, A. C. Powell, W. Bibby, F. D. Little, E. Lindley Jones, J. A. Boardley, W. M. Elkington, F. Kingsnorth, E. E. Doughty, C. L. M. Eales, J. A. Hooper, Captain M. J. de Bathe, G. Zimmer, J. Wilkinson, R. Watson, P. H. Bayliss, W. Richardson, J. Horn, W. Buxton, T. Threlford, C. Holt, F. J. S. Chatterton, W. A. Jukes, W. J. Golding, T. Snelgrove, J. C. Adams, G. K. Ireson, J. T. Dolby, A. J. White, J. G. Faircliffe, L. C. Verrey, and G. Tyrwhitt-Drake, hon. secretary and treasurer.

The minutes of the last general meeting were signed as correct.

The reception and adoption of the annual report.—The president remarked that the report did not call for any particular explanation on his part. The financial state of the club was satisfactory, and he proposed, seconded by Mr. P. H. Bayliss, that the report be received. Mr. Hesford drew attention to the first paragraph on page 2, fourth line, suggesting that the words "Press which may have caused an altogether false opinion to be formed by members, and it is hoped that till the matter is finally dealt with it will be treated with an open mind," be deleted. After a short discussion Mr. Hesford formally moved this, seconded by Mr. P. H. Bayliss, which, having been carried, the report was then adopted with this alteration.

Reception and adoption of the hon. treasurer's statement.—The hon. treasurer having remarked that the financial state, he thought, was satisfactory, the deficit of £41 on last year having been wiped off and the sum of £13 added to the

funds of the club, in other words, the result was £54 better this year than last. He further mentioned that the subscriptions received from members with regard to numbers were highly satisfactory. The report was then unanimously adopted.

Election of auditor.—The Rev. E. Lewis Jones then proposed, seconded by Mr. H. Wallis, that a hearty vote of thanks be passed to Mr. J. Horn for his past services, and that he be asked to consent to stand again for the same office. Mr. Horn having agreed, was elected unanimously.

Mr. H. Wallis then moved, on behalf of the Council, that the club rules be altered from their present form. He then briefly went through the rules, stating the chief alterations from the old ones, and gave explanations as to why it was deemed necessary that they be altered. Several minor points in Rules 10, 17, 20, and 24 having been raised and carefully discussed, the proposition was put to the room and carried nem. con.

Mr. G. French then moved the following:—"That canvassing for votes in connection with any Poultry Club election be an absolute disqualification, and the person so doing be treated under the rules relating to discreditable conduct. That this be inserted in the rules." After considerable discussion the proposer agreed to alter the wording, and the following was suggested:—"That canvassing for votes or nominations in any Poultry Club election by or with the knowledge or consent of any candidate shall render the election of such candidate null and void, and the Council may deal with him as being guilty of discreditable conduct under Rule 24, and that the Council be empowered to define the meaning of canvassing. It was finally left to the Council to draft the new rule prohibiting canvassing at Poultry Club elections. This having been seconded by Mr. Watson, was carried, only one member present voting against it.

The president then read the result of the recent election, and vacated the chair, the Rev. T. W. Sturges, the new president, taking his place.

Votes of thanks to the retiring president, hon. solicitor, and hon. secretary having been passed, the meeting closed.

G. TYRWHITT-DRAKE, Hon. Sec. and Treasurer,
Cobtree, Sandling, Maidstone.

THE PARTRIDGE WYANDOTTE CLUB.

THE annual general meeting was held at the Dairy Show on October 4. Present: Mr. R. Watson (president), Miss J. Macquillan, Messrs. C. N. Goode, W. Jenkins, J. Wharton, W. Foulds, F. W. Myhill, J. H. Hearn, J. A. Boardley, Hugh Gunn, and W. M. Elkington. After the formal business it was announced that F. W. Myhill had been elected to judge the Club Show at Cirencester on November 22 and 23, for which the classification was arranged. A class was put on for unrun pullets, in addition to one for pullets wearing conference rings, and two classes for breeding-pens, limited to the values of £5 and £10 respectively, in order to give amateurs a chance, these classes being guaranteed by Mr. W. Jenkins. Attention is called to the long list of valuable specials for members, the bulk of which are for amateurs and novices, including one for the best shown by a member joining the club since October 1, 1911. Votes of thanks to the officials concluded the meeting, which was of an enthusiastic character, and presage revived interest in this breed.

W. M. ELKINGTON, Hon. Secretary.
Ladye's Hill, Kenilworth.

THE UTILITY POULTRY CLUB'S FOUR MONTHS' LAYING COMPETITION.

THE three weeks given to the competing birds to settle down in their new surroundings terminated on October 16, and reports have been received from the respective Managers as to the state of the birds at the commencement of the Competitions. Both managers, Mr. Wm. Barron of Bartle, near Preston, and Mr. Geo. Nicholls, of Grimley, near Worcester, have forty pens of four birds each under their care. Trap-nests are used so that the record of each bird is kept.

REPORT OF THE MANAGER OF THE NORTHERN COMPETITION:

"I can with great pleasure report a clean bill of health prior to commencing their winter laying.

"Numbers 2, 7, 11, 14, 15, 16, 19, 22, 23, 37, 38, 40, 49, 55, 57, 69, 72, 73, 74, 75, 76, 77, 78, 80, 81, 82, 83, 84, 85, 89, 91, 92, 93, 95, 96, 100, 102, 103, 104, 109, 111, 112, 114, 119, 120, 122, 133, 143, and 134 have already begun their task.

"The weather has been fine, with frosty nights at intervals.

"All the birds have taken to their new quarters and seem quite at home, taking to the trap-nests very well, with the exception of two pens which have given me more trouble than all the rest.

"October 16, 1911."

REPORT OF THE MANAGER OF THE SOUTHERN COMPETITION:

"The forty pens under my charge comprise fifteen White Wyandottes, six Buff Orpingtons, four Buff Rocks, three Rhode Island Reds, two Croad Langshans, one Partridge Wyandotte, six White Leghorns, two Campines, one Buff Leghorn.

"Taken on the whole, the pullets look a more level lot than last year. The earlier birds are missing, also the long tail of rather immature birds.

"Type and feather in most of the varieties have improved, and size has certainly been kept within reasonable bounds.

"Good judgment seems to have been displayed by the competitors in the selection of their pullets, as the bulk of the birds look on the point of laying but have not yet commenced.

"A few of the pens had colds upon arrival, but have now recovered. In most cases they were contracted on the journey, and the senders themselves were generally responsible for this by crowding four birds into a basket large enough for two.

"Moulting at this stage last year claimed 30 per cent., but this year the total is only 6 per cent.

"October 16, 1911."

Both Managers will be pleased to welcome visitors to the Competition.

L. W. H. LAMAISSON, Hon. Secretary.
Merstham, Surrey, October 19, 1911.

Dirty Eggs.

Professor Rice, of the Cornell University, says that "a dirty egg is a disgrace to the one who sells it." We wish that his sentence could be burnt into the minds of producers, and that vendors of dirty-shelled eggs felt the shame of it.

Poultry School in Argentina.

A School of Air Culture is to be established at La Plata as an annexe to the Zoological Garden, to give instruction in poultry and other subjects. A course in carpentry and other trades necessary in the work of poultry-keeping is part of the scheme.

THE SOUTHPORT SHOW.

To the Editor of the ILLUSTRATED POULTRY RECORD.

DEAR SIR,—I notice in your October issue that Mr. Broomhead draws attention to our recent show at Southport. I thank him for the compliment, but why does he only tell one-half the tale? Surely the remainder merits equal treatment. Mention is made of a letter I contributed to the Press, which he describes as "pathetic," and to wind up with, a "brilliant" passage. Well, Mr. Broomhead, whether you considered it as such or whether we are to interpret your remarks as a mild form of veiled sarcasm is perfectly immaterial; whatever my letter may be, present-day show conditions are certainly a good deal *more* than pathetic. True, we had to extend, and to make a further appeal, but, sir, fundamental truths can never be too familiarly explained—and constant application overcomes the greatest difficulties, whilst compliance with bad customs argues cowards. And re such necessity for extension, the very conditions we complain of supply the cause. Amateurs have had such scant encouragement in the past that many have given up exhibiting in disgust—and no great wonder; hence the slackness in sending on entries. But remove the cause, sir, and the answer to your question will soon be supplied. However, Southport tried to help the amateur to free himself from the fetters of professional monopoly, and, we maintain, results justified our efforts. Many entries did come late; but "better late than never," and as fair and honest dealings seldom fail to bring their due reward, and cloudy mornings often bring fair evenings, so it was with us. We have now held two shows on similar lines, with a grand total in 48 classes of 1,012 entries, or an average of over 21 birds per class per show. The first year several ascribed our success to the "novelty," but that cannot be again put forward. Now, sir, candidly, doesn't such record support prove beyond question that the amateur grievances are very real, and anything but imaginary? And emulation is one of the greatest incitements to application, I hope the amateur reform movement will now receive the due consideration it undoubtedly merits. The show itself was of no personal benefit to me. I received no remuneration directly or indirectly, neither did I exhibit; and, as you may know, the extra work such extension compels is no joke to any secretary. I paid full prize-money within forty-eight hours of the show, and tried in every way to redeem my promises. My sole desire was the furthering, as far as ever possible, of our object to help and encourage the amateur, and from the very many more than kind letters since received I think Southport may claim, if but only in a small measure, to have done something towards this end. But in his brief paragraph Mr. Broomhead, whether by accident or design, most unkindly leaves us struggling in the stormy and tumultuous seas, and being rudely buffeted towards the terrible rocks of—shall I borrow his own word, and call them the rocks of irony? Very well, let the term suffice. The very course we sailed compelled us to steer off the beaten track and the popular customary dredged channel. But, sir, no mention is made of the launching of the "amateur lifeboat" and the thrilling manner of our ultimate rescue and safe return to

port. Oh, dear, no! That is evidently another story. But whether Mr. Broomhead considered our, then, unfortunate position as ironical or not, I would quite respectfully ask him to, in future, faithfully complete that which he considers worthy of commencing.

Thanking you in favour of an insertion, yours faithfully,

A. V. HOLT, Hon. Secretary.

Southport.

BOOK - KEEPING.

MUNRO'S BOOK-KEEPING DOWN TO DATE. Andrew Munro, F.C.I.S. London: Effingham Wilson. Price 1s.

EXCEPT to the accountant and the banker, book-keeping is an art about which the average man knows very little. To his mind the name suggests ponderous ledgers and musty offices; that it is a thing about which it is necessary he should have some knowledge if he wishes to succeed in his business has never struck him, and he is quite content to rub along with a general acquaintance with the ordinary rules of arithmetic and the pleasing knowledge that his bank-book shows a balance in his favour. For this reason there are a large proportion of men engaged in small businesses who, if it came to the point, could not say accurately how much they are worth without a considerable amount of searching among odds and ends of papers, combined with a reliance on their memory of small transactions. Hitherto book-keeping has been so ponderous a subject to tackle that only those who really feel the necessity for a knowledge of it have attempted to study it. But that excuse for neglecting it is now worthless. For quite a nominal sum one can become possessed of a book that not only gives a good working knowledge of the art, but gives it in an interesting and attractive manner. That this has been recognised is proved by the fact that after four large editions, the fourth of which was reprinted twice, have been exhausted, a new and revised edition of "Munro's Book-Keeping Down to Date" has just been issued. Many new chapters have been added, including a special article on monthly periodic statistics, used by the author as accountant for a number of years past. A considerable number of graduated exercises have been added at the end of each chapter in order to provide the fullest scope to the student in practical working, and all the latest examination papers of the Royal Society of Arts, London Chamber of Commerce, &c., have been included. While of great service to all studying book-keeping, it is also an ideal book for anyone starting a small business who has not time to go deeply into the art. A good working knowledge can be acquired by anyone with the minimum of trouble, and the concise way in which the uses of the various books are explained enables one to get a grasp of the subject in the first few pages. The meanings of purchases day book, the sales day book, cash book, bills books, journal and ledger, hitherto buried in rows of figures, stand out clear at first reading, and, with a working knowledge of these, one can see exactly how one stands and keep a sound grip on every portion of one's business.

ANSWERS TO CORRESPONDENTS.

Rearing Ducklings.

I have read somewhere that ducklings for killing should receive no exercise. Is this so? I have a good stream, and always give my ducklings full freedom all day long, but they never seem to grow very quickly.—R. T. L. (Whitby.)

What you read is quite correct, and ducklings intended for killing should have as little exercise as possible. The less they move about the more rapidly do they grow. It is true under these circumstances their health is liable to suffer, and such treatment would be fatal for stock birds, but as they are to be killed when eight or ten weeks old no harm ensues. They should be closely confined in a small run from the very first, which requires to be kept scrupulously clean, the straw being changed every day. With good feeding and suitable treatment Aylesbury ducklings should weigh from 4lb. to 5lb. when eight or nine weeks old.

Trussing for Market.

Will you kindly give particulars as to the meaning of the term trussing for market in the Devonshire manner?—H. M. S. (Luton.)

To tie a fowl you require three pieces of string, one a little longer than the other two; and the string must not be too fine or it will cut into the skin. The longer piece is used to tie round the hocks, drawing these joints fairly close together, crossing the string over the vent and fastening it securely round the tail or "parson's nose." The two short pieces are tied one each round the middle toe of each foot, bringing the legs forward and drawn inwards so that the two pieces of string may be tied tightly behind the neck; the wings being tucked in may be included in the tying that passes from the toes to the back of the neck at the top of the bird's back.

Short Replies.

N. W. (Maidenhead): No.

F. P. W. (Burnley): Read the article in this issue.

M. J. H. (Southgate): 1. No. 2. No. 3. No. 4. Yes.

E. H. (Bolton): We have no information on that subject.

L. W. (Slough): Refer to our issue of May, 1909. Page 492.

F. V. (Calais): We cannot undertake such work as you indicate.

S. G. M. (Forfar): The district mentioned would be very suitable.

L. Q. (Finton): 1. 21s. the quarter. 2. 15 per cent. 3. Very seldom.

J. T. (Southampton): Three weeks, or for show birds four weeks.

W. S. (Wrexham): There is no definite information on that subject.

W. J. (Blackburn): There are single- and rose-comb Rhode Island Reds.

M. B. (Gloucester): Refer to our advertising columns for eggs for hatching.

E. N. (Reading): Send us further particulars, and we shall be glad to advise you.

M. B. (Newbury): Any of the leading makes are reliable. Refer to our advertising columns.

M. B. B. (Gateshead): Faverolles - Buff Orpington would be a suitable cross for your purpose.

F. P. (Harrogate): A long hundred with reference to eggs is the name given to ten dozen, or 120.

E. R. (Buenos Ayres): We are making inquiries, and will let you know as soon as possible.

E. F. (Leith): Imported eggs from Denmark at this season of the year are practically all preserved.

N. W. (Taplow): We do not believe permanganate of potash has any effect in the direction named.

F. P. (Dundee): Try rubbing the wound with flowers of sulphur, keeping the bird in a coop under cover.

J. G. (Blackburn): If you will cool your eggs for at least twice as long we think the result will be better.

M. A. (Düsseldorf): We do not think very much of the method you mention. Refer to page 364, Vol. I.

G. B. S. (New York): 1. The first or second week in October. 2. The third week in November. 3. About a month previously.

L. C. (Newburyport, Mass., U.S.A.): 1. Such birds can be purchased on this side from 10s. each and upwards. 2. On the number of birds suggested the freight should not cost more than 5s. each.

COLOUR OF JUBILEE ORPINGTONS.

To the Editor of the ILLUSTRATED POULTRY RECORD.

DEAR SIR,—I shall be pleased if you will kindly let my many customers and friends know through your valued columns that I shall not be showing any Jubilee Orpingtons this season at the Palace or the Club Shows.

My reason for not showing is the undecided state of the Club and of the judges as to what shade of mahogany is required in the hackle, saddle hackle, &c., of the cocks and cockerels. I have been breeding specially for colour for the last three seasons, as I consider in a bird of three colours this is the most important point, and in our Standard there are more points given for colour than for anything else.

The judges now seem to consider colour very little, and go almost entirely for size; so until I can get the Club to say what colour they require I shall not show.

One member in particular tells me there are at least a dozen shades of mahogany. There may be a hundred for all I know, but I think most people's idea of mahogany is pretty near of one shade.

One may show a cream-coloured bird of tremendous size and splendid type in a White Class, but no good judge will place it first, and yet birds which are very little darker than straw colour on top can win in Jubilee Orpington Classes, if they are big.—Yours faithfully,

WALTER BUXTON.

Bentworth, Alton, Hants, October 20, 1911.

TRADE NOTICES.

A Gold Medal for "Clarendo."

The Committee of the Festival of Empire of the International Exhibition at the Crystal Palace have awarded Messrs. White, Tomkins, and Courage, Ltd., 48, Mark Lane, E.C., a gold medal for their exhibit of "Clarendo" Foods at their stand No. 116 of the Small-holding Section. These foods comprise "Clarendo" Cooked Food A1 quality for chicken-rearing and general purposes, "Clarendo" Poultry Meal for egg-production, "Clarendo" Fattening Meal and Chicks' Delight, Fine and Coarse.

Mustard for Poultry.

Mr. R. A. Allen has published an interesting booklet containing 101 reasons why mustard should be employed to stimulate egg-production during the winter months. Mr. Allen superintended an experiment to test the value of mustard for egg-production, which was carried out at the Llangammarch Wells Poultry Farm, to which we referred in these columns last year. It was found that the publication of the results of this experiment evoked so heavy a correspondence that it was necessary to publish the report in book form; in fact, so great was the interest aroused that second and third editions were required. We have not space to give full particulars, but we strongly recommend our readers to send for a copy of this booklet from Mr. Allen, Sawbridgeworth, Herts.

Exportations.

During the past month Messrs. William Cook and Sons have shipped from the "Home of the Orpingtons," Orpington House, St. Mary Cray, Kent, many birds, including the following:

Per ss. Dunluce Castle, to Capetown, one pen each of Croad Langshans and Black Leghorns; per ss. Minneapolis, to Fishkill-on-Hudson, a pen of Black Orpingtons; per ss. Elysia, to Muttra, N. P. India, two pens each of White Orpingtons and Aylesbury ducks; per ss. Kenilworth Castle, to the Transvaal, a pen of Black Leghorns; per ss. Tunisian, to Montreal, two pens of Buff Orpingtons; per Messrs. McGrath, Liverpool, to Rio de Janeiro, a pen each of Barred Rocks and Buff Orpingtons; per ss. Kwala, to Singapore, one pen of Minorcas, two pens of Black Orpingtons, and one of Partridge Wyandottes, Light Brahmas, White Whandottes, Andalusians, Golden Wyandottes, Buff and White Orpingtons; per Continental express to Riga-Sassenhof, a pen each of Black Orpingtons, White and Buff Orpingtons; per ss. Dalmatia, to Calcutta, a pen each of American Mammoth Bronze turkeys, Langshans, and two White Leghorn cockerels, one Minorca, and one Buff Orpington cockerel; per ss. Inyati to Harri-smith (Orange River Colony), a pen of White Orpingtons; and per ss. City of Lahore, to Karachi, a pen each of White Orpingtons and White Leghorns.

Mr. Tamlin's Exports.

The following is a list of Mr. Tamlin's exports for September, 1911: Six 100 incubators, to G. Baralls, sole agent for Italy; twelve 100 incubators, six 60 incubators, six 100 Sunbeam foster-mothers, to A. Newcomb and Co., sole agents for New Zealand; six 100 incubators, six 60 incubators, three 200 incubators, to Messrs. W. and N. Chandler, sole agents for Australia; six 100 incubators, six 60 incubators, six 30 incubators, to John F. Marshall, sole agent for the Transvaal, South Africa; ten 100 incubators, six 100 foster-mothers, to André Masson, sole agent for France; one 100 incubator, to W. Whipps, Orange River Colony, South Africa; one 100 incubator and one 100 foster-mother, to T. Warrior, Monte Video; one 60 incubator, to S. Whitefield, Colombo; one 100 incubator, one 60 foster-mother, and one Surbiton poultry-house, to A. McKie, Algoa Bay; two pens of Buff Orpingtons and White Orpingtons, to J. M. Lawrence, East London, South Africa; one 200 and one 100 incubator, to S. E. Voss, Demerara; and one 200 incubator, to Miss Hull, Holland.

OUR BOOK MARKET.

Any of the following books will be supplied at the prices named. Cash must always accompany orders.

Amateur Poultry-Keeper. By W. M. ELKINGTON. 120 pages. Fifteen illustrations. Price, 1/2 post free.

Incubators and their Management. By J. H. SUTCLIFFE. Fifth Edition. Illustrated. Price, post free, 1/2.

Lett's Poultry-Keeper's Account Book. Edited by LEWIS WRIGHT. Cr. 8vo. Post free in the United Kingdom, the Colonies, and foreign countries, 2/8.

Poultry and Egg Raising at Home. By W. M. ELKINGTON. Illustrated. Price, post free, 1/2.

Poultry Culture for Profit. By Rev. T. W. STURGES, M.A. Third Edition. Cr. 8vo, 134 pages. Fully illustrated. Post free in the United Kingdom, the Colonies, and foreign countries, paper covers, 1/3; cloth, 1/9.

Poultry Fattening. By EDWARD BROWN, F.L.S. Fifteen illustrations, 120 pages. Price, 1/2 post free.

Poultry for Prizes and Profit. By JAMES LONG. New Edition. Revised by W. M. ELKINGTON. Illustrated. Post free 6/4 in the United Kingdom; in the Colonies and abroad, 7/6.

Poultry-Keeping as an Industry for Farmers and Cottagers. By EDWARD BROWN, F.L.S., Secretary of the National Poultry Organisation Society. Sixth Edition. 4to, 206 pages, fully illustrated. Post free in the United Kingdom, 6/6; 6/9 to the Colonies and foreign countries.

Popular Poultry-Keeping. By W. M. ELKINGTON. Illustrated. Price, post free, 1/2.

Possibilities of Modern Poultry-Farming. By J. STEPHEN HICKS and W. H. G. EWART. Price, 1/1½ post free.

Progressive Poultry Culture. By ARTHUR A. BRIGHAM, B.S., Ph.D. Illustrated. 300 pages. Post free, 6/6.

Races of Domestic Poultry. By EDWARD BROWN, F.L.S., Secretary of the National Poultry Organisation Society. 4to, 234 pages, with chapters on breeding, fully illustrated. Post free in the United Kingdom, 6/6; 6/9 to the Colonies and foreign countries.

Record Poultry Book. Nine illustrations. Written by Experts. Post free, 1½d.

Record Poultry Book. Nine illustrations. Written by Experts in Welsh. Price, post free, 1½d.

Report on the Poultry Industry in America. By EDWARD BROWN, F.L.S. Third Edition. Fully illustrated. Price, post free, 1/3.

Report on the Poultry Industry in Denmark and Sweden. By EDWARD BROWN, F.L.S. Fully illustrated. Price, post free, 1/3.

Report on the Poultry Industry in Belgium. By EDWARD BROWN, F.L.S. Fully illustrated. Price, 1/-; post free, 1/2.

The New Book of Poultry. By LEWIS WRIGHT. Demy 4to, 600 pages, with many coloured plates, &c. Post free in the United Kingdom, 21/10; 24/- to the Colonies and foreign countries.

The Poultry Manual. By Rev. T. W. STURGES, M.A. 600 pages, 52 illustrations. Price, 6/6 post free.

Report on the Second National Poultry Conference, 1907. Edited by EDWARD BROWN, F.L.S. 382 pages, with nine illustrations. Post free in the United Kingdom, 5/6; in the Colonies and foreign countries, 6/-.

The Practical Poultry-Keeper. By LEWIS WRIGHT. Cr. 8vo, 320 pages, with eight coloured plates and other illustrations. Post free in the United Kingdom, 3/10; 4/- to the Colonies and foreign countries.

THE ILLUSTRATED POULTRY RECORD,
TUDOR HOUSE, TUDOR STREET, E.C.